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EXHIBIT E3

CHAPTER 94 REPORT FOR 2020  
EAST GOSHEN TOWNSHIP

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**2020 Chapter 94 Report for Ridley Creek Sewage Treatment Plant  
East Goshen Municipal Authority  
Chester County, Pennsylvania**

**Chapter 94  
Municipal Wasteload Management  
Annual Report**

**2020  
East Goshen Municipal Authority  
RIDLEY CREEK SEWAGE TREATMENT PLANT  
Chester County, Pennsylvania**

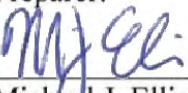


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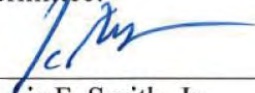


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**FIGURES**

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## **1.0 INTRODUCTION**

This report is provided to comply with the Title 25, Chapter 94 Municipal Wasteload Management regulations of the Pennsylvania Department of Environmental Protection (PADEP) concerning wastewater facilities. The subject of this report is the Ridley Creek Sewage System and Treatment Plant, owned by East Goshen Municipal Authority (Authority). The Authority assigns East Goshen Township (Township) to run the sewer system and Ridley Creek Sewage Treatment Plant (RCSTP). The Authority contracted with Big Fish Environmental Inc. to operate the RCSTP in 2020.

The Authority provides wastewater service to a majority of East Goshen Township and a limited number of residents in neighboring East Whiteland, West Goshen, West Whiteland, and Willistown Townships, Chester County. The remaining public wastewater customers have their wastewater treated by West Goshen Township (West Goshen Service Area) or Westtown Township (Westtown Service Area) through intermunicipal agreements with East Goshen.

The areas served by the Ridley Creek, West Goshen, and Westtown Sewage Treatment Plants are depicted below, with the Ridley Creek Service Area shaded:

### **Summary of Drainage Basins**

Drainage Basins, Meter Pits (M.P.) and Pump Stations (P.S.)			Discharge Point
Ridley Creek Service Area			
	Hershey's Mill P.S.	→	Ridley Creek STP
	Hunt Country P.S.	→	
West Goshen Service Area			
Barkway P.S.	Hicks M.P.	→	Westtown Way M.P. West Goshen Township
Wilson Dr. M.P. (from West Goshen)		→	
Paoli Pike M.P. (from West Goshen)		→	
	Ellis Ln. M.P. (from West Goshen)	→	
	Ashbridge P.S.	→	
Westtown Service Area (Summit House and Cider Knoll condominiums)			→ Westtown Township

## **1.1 Treatment Plant Description**

The Ridley Creek Sewage Treatment Plant (RCSTP) provides wastewater treatment for the portion of East Goshen Township in the Ridley Creek Watershed, 24 homes in East Whiteland (the Ridley Creek Service Area), and 19 homes in Willistown Township (the Ridley Creek Service Area). The plant was upgraded and expanded from an extended aeration treatment system to a sequencing batch reactor (SBR) treatment system in 2010. The plant has been in continuous operation since 1985.

The permit for the RCSTP (NPDES Permit #0050504) was issued in September of 2006 as a two-phase permit. During the first phase, the planning and construction of the plant's

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expansion and upgrade, the permit allowed for an annual average flow of 0.40 million gallons per day (MGD). After the completion of construction and final acceptance, which occurred in 2011, the plant's permitted annual average flow increased to 0.75 MGD. The current permit for the RCSTP (NPDES Permit #0050504) became effective on March 1, 2012. A NPDES Permit Renewal was issued on April 18, 2017.

The upgraded RCSTP is an SBR activated sludge facility consisting of an influent grinder and screen, 2,100 gpm (3.0 MGD) influent pumping station, four tank SBR system, post equalization tanks, effluent filtration, and UV disinfection. Solids treatment consists of the previously mentioned influent grinder and screen; aerobic sludge digestion; and a dewatering centrifuge with polymer addition. Screenings and dewatered sludge are hauled off-site for disposal at a properly permitted solid waste landfill. There are both influent and effluent flow meters at the treatment plant. Refer to the attached Drawing G-1 "RCSTP Upgrade & Expansion Process Flow Diagram" for a diagram of the treatment process.

## **1.2 Sewer System Description**

The collection system in the Ridley Creek Service Area has been constructed in phases since 1985 and consists of primarily PVC gravity sewers and precast concrete manholes. The collection system was constructed in accordance with the then current Township Specifications and under the professional inspection and surveillance of the Authority's Engineer.

Two pump stations, the Hunt Country Pump Station and the Hershey's Mill Pump Station, are located within the Ridley Creek Service Area. Both pump stations have a typical duplex submersible pump arrangement. The Hunt Country Pump Station has a rated capacity of 0.025 MGD, and the Hershey's Mill Pump Station has a rated capacity of 0.083 MGD.

In addition to the flow meters at the RCSTP and on the Hershey's Mill Pump Station discharge piping, there is one permanent flow meter in the Ridley Creek Service Area gravity conveyance system between MH R-217 and R-218 located near Hibberd Lane and Boot Road that was installed in January 2021.

## **1.3 Engineering Studies and Sewer Diversion Plans**

### ***2007 Township Wastewater Needs Evaluation***

The Township Wastewater Needs Evaluation identified wastewater needs in the Township and evaluated alternatives for future wastewater management. Existing wastewater capacity commitments currently planned and potential development and their associated wastewater management needs were identified. Multiple wastewater disposal alternatives, including the utilization of treatment capacity at facilities in other municipalities, were identified and evaluated.

The study estimated that the maximum potential wastewater generation from the Township may be as much as 1,700,000 gpd with an estimated 1,300,000 gpd in the West Goshen Service Area and approximately 400,000 gpd that would flow to the RCSTP. The study

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reaffirmed the 1999 Act 537 Plan Update's conclusion to expand the RCSTP to 750,000 gpd and recommended the diversion of flows in excess of 1,000,000 gpd (the maximum flow under the East Goshen-West Goshen intermunicipal agreement) from the West Goshen Service Area to the RCSTP. Implementation of the diversion of flows is described hereafter.

***2012 Closure and Diversion of the Lockwood Chase Sewage Treatment Plant (LCSTP)***

The PADEP issued a draft permit amendment in 2007 for the Lockwood Chase Sewage Treatment Plant (LCSTP) requiring a significant number of upgrades. Given the potential cost of upgrading the LCSTP, the Authority elected to close and decommission the LCSTP and divert wastewater from Lockwood Chase to an existing public sewer system, abandon the aged sewage treatment plant and spray irrigation facilities, and convey wastewater for treatment at another existing sewage treatment facility. A gravity sewer diversion to convey all flows from the Lockwood Chase development to the existing sewer system tributary to the Authority's Hershey's Mill Pump Station was constructed in spring 2012 and became operational in May 2012 when Lockwood Chase wastewater was diverted into the new sewers. The LCSTP closure/ decommissioning was completed in fall 2012.

***2013 Diversion of the Hershey's Mill and Reserve Pump Stations***

The Hershey's Mill and Reserve Pump Stations previously discharged to the West Goshen Service Area and were diverted to the Ridley Creek Service Area in 2013. The Hershey's Mill Pump Station diversion was completed in July 2013 and was accomplished by diverting the 6-inch force main to an existing gravity sewer in the Ridley Creek collection system at Cornwallis Drive. This connection required the construction of approximately 1,000 feet of new force main through a private right-of-way and crossing a tributary of Ridley Creek.

The Reserve Pump Station diversion was completed in October 2013 and was accomplished by demolishing the pump station and constructing an approximate 700-linear foot, 8-inch PVC gravity sewer extension to an existing Ridley Creek collection system gravity sewer at Forrest Lane. The route of the new sewer runs parallel to a tributary of Ridley Creek and crosses approximately 300 feet of private property with the remainder in dedicated open space and public right-of-way. The Reserve Pump Station previously discharged into the gravity sewer system upstream of the Hershey's Mill Pump Station. Following the Reserve Pump Station diversion, the Reserve wastewater is now conveyed directly into the Ridley Creek Service Area and is no longer conveyed through the Hershey's Mill Pump Station.

***2013 Diversion of the Marydell Pump Station***

The Marydell Pump Station previously discharged to the West Goshen Service Area and was also diverted to the Ridley Creek Service Area in 2013. This pump station served 31 homes in the Marydell Farms development, and due to its age, required replacement. The diversion was completed in July 2013 and was accomplished by demolishing the pump

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station and constructing an approximate 950-linear foot, 8-inch PVC gravity sewer extension to an existing Ridley Creek collection system gravity sewer at Saratoga Drive. The route of the gravity diversion starts at the pump station, runs east along Paoli Pike, and connects to the existing public sewer at Saratoga Drive.

***Proposed Reservoir Road Pump Station Diversion***

The Authority is proposing a pump station at the intersection of Reservoir Road and Strasburg Road to divert a portion of flows from the Chester Creek Interceptor (West Goshen Service Area) to the Ridley Creek Service Area. The diversion is planned to occur when the flows conveyed to West Goshen exceed 1.0 MGD which is projected to be beyond the next five years. The diversion is proposed to be accomplished by constructing an approximate 8,500-linear foot force main to convey up to 300,000 gpd. The diverted flow is proposed to be adjusted on a weekly or bi-weekly basis to maintain flows to West Goshen at 1.0 MGD.

An Act 537 Plan Update for the Reservoir Road Pump Station Diversion was approved by PADEP on January 7, 2015. The Water Quality Management (WQM) permit (WQM Permit #1516404) was issued on March 10, 2017.

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## **2.0 HYDRAULIC AND ORGANIC LOADINGS**

### **2.1 Hydraulic Loading**

The RCSTP is permitted for an annual average flow of 0.750 MGD, a design hydraulic (maximum day) capacity of 0.750 MGD, and a peak hourly flow of 3.0 MGD.

Table 1 summarizes the RCSTP's hydraulic loading data and the current calendar year's rainfall. Refer to the attached Chart 1 for a line graph depicting the plant's average flows for the past five years.

With the exception of periods referenced below and in the Table 1 footnotes, the influent hydraulic loading prior to November 2012 was measured at the permanent influent flow meter located on the force main between the influent pump station and the SBR tanks. The permanent influent flow meter not only captured the influent flow but also side stream and backwash flows recycled to the head of the plant. The process return flows are recycled to the head of the plant downstream of the influent grinder and fine screen but upstream of the influent pump station. The flows include spray wash from the influent fine screen unit, disk filter back wash and sludge wasting cycles; decanted water from the twin aerobic sludge digesters; centrate from the centrifuge; utility sinks; utility water blow off; and the laboratory bathroom and sink. The volume of recycled water could not be reasonably estimated or excluded from the influent metered flows during this time period.

In fall 2012, the Authority installed a new permanent inflow meter upstream of the recycle feed to comply with PADEP's request to not include recycle flows in the influent hydraulic loading. The influent hydraulic loadings in Table 1 from 2016 through 2020 therefore do not include recycle flows unless noted otherwise in the table's footnotes. However, it should be noted that this meter has become unreliable in 2019 and 2020 and a new meter is planned to be installed soon. The meter will be placed on the influent piping in a location that is expected to provide reliable operation in accordance with metering manufacturer recommendations.

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<b>Table 1</b>						
<b>Hydraulic Loading (MGD)</b>						<b>Rainfall (inches)</b>
<b>Month</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2020</b>
January	0.466	0.435	0.429	0.688	0.394	3.8
February	0.602	0.404	0.495 <sup>(1)</sup>	0.616	0.422	3.3
March	0.498	0.443	0.527 <sup>(1)</sup>	0.647	0.477	4.8
April	0.437	0.470	0.613	0.519	0.522	7.2
May	0.451	0.442	0.510	0.527	0.477	2.6
June	0.273	0.404	0.550	0.552	0.452	4.7
July	0.248	0.372	0.431	0.487	0.453	5.9
August	0.307	0.355	0.490	0.415	0.416	12.8
September	0.334	0.385	0.591	0.463	0.427	4.2
October	0.354	0.452	0.527	0.383	0.420	7.6
November	0.387	0.399	0.656 <sup>(1)</sup>	0.430	0.512	5.8
December	0.443	0.415	0.648 <sup>(1)</sup>	0.423	0.559	7.1
<b>Annual Average (AA)</b>	0.400	0.415	0.539	0.513	0.461	5.8
<b>3 Month Max. Average</b>	0.522	0.452	0.610	0.650	0.497	
<b>Ratio (3 Month Max to AA Ratio)</b>	1.305	1.089	1.132	1.269	1.078	
<b>5-Year Average Hydraulic Ratio =</b>					1.175	

<sup>(1)</sup> The field influent meter (prior to recycle) was offline for February and March 2018 as well as November and December 2018. Flows for this period are from the RCSTP influent pump station flow meter which includes recycle flows.

The 2020 average hydraulic load for the entire year was 0.461 MGD, which is well below the permitted capacity of 0.750 MGD. Additionally, there were no months when the monthly average flow exceeded or even approached the design hydraulic loading of 0.750 MGD. At the end of 2020, there were approximately 2,007 EDUs connected to the Ridley Creek collection system with an average flow rate of 230 gpd/EDU.

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## **2.2 Organic Loading**

The RCSTP is permitted for a design organic loading capacity of 2,098 lbs/day.

Table 2 and Table 3 summarize the RCSTP organic loading data. Refer to the attached Chart 2 for a line graph depicting the average organic loading for the past five years.

Influent organic loading (lbs/day) is calculated using the influent BOD<sub>5</sub> (mg/L) concentrations and the influent flow on the day sampled. The influent sampling frequency is typically once per week. Influent samples are 24-hour composite, flow-proportioned, and sampled for BOD<sub>5</sub> (not CBOD<sub>5</sub>). The influent organic sampling location is upstream of the recycle; therefore the samples do not contain recycled flows, unless noted otherwise in the Table 2 footnotes.

The RCSTP did not receive any hauled-in septage in 2020.

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<b>Table 2</b>				
<b>Organic Loading Sampling Data</b>				
	<b>A</b>	<b>B</b>	<b>C = A x B x 8.34</b>	
<b>Date of Sample</b>	<b>BOD<sub>5</sub> (mg/L)</b>	<b>Flow (MGD)</b>	<b>Daily BOD<sub>5</sub> (lbs/day)</b>	<b>Monthly Average (lbs/day)</b>
1/7/2020	303	0.375	948	
1/14/2020	223	0.347	646	
1/21/2020	49	0.365	149	
1/28/2020	143	0.396	472	554
2/4/2020	165	0.362	498	
2/11/2020	267	0.465	1,036	
2/18/2020	122	0.448	456	
2/25/2020	133	0.430	476	617
3/3/2020	291	0.432	1,049	
3/10/2020	285	0.445	1,059	
3/17/2020	194	0.438	709	
3/24/2020	227	0.485	918	
3/31/2020	259	0.498	1,076	962
4/7/2020	144	0.477	572	
4/14/2020	233	0.562	1,092	
4/21/2020	180	0.532	799	
4/28/2020	216	0.488	879	836
5/5/2020	131	0.527	575	
5/12/2020	269	0.470	1,055	
5/19/2020	318	0.444	1,178	
5/25/2020	259	0.472	1,020	957
6/2/2020	253	0.453	955	
6/9/2020	172	0.485	695	
6/16/2020	248	0.468	968	
6/23/2020	169	0.467	658	
6/30/2020	197	0.444	729	801



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<b>Table 2</b>				
<b>Organic Loading Sampling Data</b>				
	<b>A</b>	<b>B</b>	<b>C = A x B x 8.34</b>	
<b>Date of Sample</b>	<b>BOD<sub>5</sub> (mg/L)</b>	<b>Flow (MGD)</b>	<b>Daily BOD<sub>5</sub> (lbs/day)</b>	<b>Monthly Average (lbs/day)</b>
7/7/2020	229	0.483	922	
7/14/2020	155	0.420	543	
7/21/2020	223	0.446	829	
7/28/2020	183	0.478	729	756
8/4/2020	229	0.629	1,202	
8/11/2020	205	0.356	608	
8/18/2020	87.7	0.329	241	
8/25/2020	270	0.468	1,053	776
9/1/2020	218	0.426	774	
9/8/2020	189	0.419	660	
9/15/2020	184	0.461	707	
9/22/2020	382	0.368	1,171	828
10/6/2020	295	0.396	973	
10/13/2020	211	0.420	740	
10/20/2020	297	0.428	1,060	
10/27/2020	233	0.410	796	892
11/6/2020	258	0.439	944	
11/10/2020	237	0.386	762	
11/17/2020	182	0.434	659	
11/24/2020	216	0.497	896	815
12/3/2020	219	0.508	928	
12/8/2020	234	0.484	945	
12/15/2020	348	0.445	1,292	
12/22/2020	298	0.553	1,374	
12/29/2020	239	0.539	1,075	1,123

The maximum monthly average organic loading was 1,123 lbs BOD<sub>5</sub>/day, which is less than the permitted design organic loading capacity of 2,098 lbs/day. The RCSTP is therefore not organically overloaded.

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Table 3 provides the 5-year organic loading of the RCSTP.

<b>Table 3</b>					
<b>Organic Loading (lbs/day)</b>					
<b>Month</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
January	761	589	524	888	554
February	1,021	336	492	810	617
March	634	475	556	650	962
April	519	329	1,169	476	836
May	570	596	809	641	957
June	636	725	580	406	785
July	263	582	640	947	756
August	415	419	750	778	776
September	642	670	655	963	828
October	275	753	482	910	892
November	561	565	875	120	815
December	382	781	781	998	1,123
<b>Annual Average</b>	557	569	693	716	825
<b>Ratio (Max. Month to Annual Average Ratio)</b>	1.83	1.37	1.69	1.39	1.36
<b>5-Year Average Organic Ratio =</b>					1.48

The 2020 annual average daily organic loading at the RCSTP was 825 lbs BOD<sub>5</sub>/day. The peak loading occurred in December 2020 with an average organic load of 1,123 lbs BOD<sub>5</sub>/day. This one-month peaking ratio is 1.36.

At the end of 2020, there were approximately 2,007 EDUs connected, contributing an average organic load of 0.411 lbs/day/EDU.

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### **3.0 5-YEAR HYDRAULIC AND ORGANIC LOADING PROJECTIONS**

#### **3.1 Organic Loading Projections**

The 5-year organic loading projections at the RCSTP are summarized in Table 4. Historic and projected organic loadings are presented graphically on the attached Chart 2.

The RCSTP's 2020 annual average loading rate, 0.411 lbs/day/EDU, is used to calculate projected organic loadings. Refer to Appendix B for a table of "Ridley Creek STP Projected EDUs and Hydraulic Load", which details the specific EDUs anticipated to be connected in each of the next five years.

The projected annual average organic loading at the RCSTP in Table 4 is calculated using the 2020 annual average organic load, 825 lbs/day, and adding the organic loading from each projected connection and diversion in the applicable year. The projected annual average organic loading is then multiplied by the 5-year average organic ratio of 1.48 (from Table 3) to determine the maximum monthly organic load projection.

<b>Table 4</b>		
<b>RCSTP Organic Loading Projections</b>		
<b>Year</b>	<b>Annual Average BOD<sub>5</sub> Loading Projections <sup>(1)</sup> (lbs/day)</b>	<b>Maximum Monthly BOD<sub>5</sub> Loading Projections <sup>(2)</sup> (lbs/day)</b>
2021	828	1,225
2022	829	1,227
2023	830	1,228
2024	830	1,229
2025	831	1,230

<sup>(1)</sup> AA Projections = (Current report year's AA Loadings) + (Loadings from Proposed EDUs).

<sup>(2)</sup> Max Month Projections = (AA Projection) x (5-year Average Organic Ratio)

Based on the permitted design organic loading capacity of 2,098 lbs/day, the RCSTP is not projected to be organically overloaded in the next five years.

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### **3.2 Historical and Projected Connections**

There was one new connection added to the Ridley Creek Service Area in 2020 for a total of 2,007 EDUs. The annual average flow of 0.461 MGD in 2020 results in an average hydraulic loading rate of 230 gpd/EDU. Refer to Appendix A for a list of the new connections in 2020.

Table 5 lists the number of EDUs that were connected in each calendar year for the last five years. The annual gpd/EDU rate was determined by dividing the total average daily flow for the respective calendar year by the number of EDUs connected to the system that year.

<b>Table 5</b>			
<b>Year</b>	<b># of EDUs Connected</b>	<b>gpd/EDU</b>	<b>New Flow (MGD)</b>
2016	5	200	0.0010
2017	3	207	0.0006
2018	0	269	0.0000
2019	0	255	0.0000
2020	1	230	0.0002

The actual gpd/EDU flow rate for 2020 exceeds the Authority's 225 gpd/EDU design flow rate. However, the flow rate notably decreased from the prior two years, which experienced excessive precipitation. There was above average precipitation in 2020 also. The Township has continued an aggressive inflow and infiltration reduction program, but the actual flows indicate the ongoing presence of inflow and infiltration. This is considered the result of the excessive precipitation in 2020 and resultant inflow and infiltration (I&I). For planning purposes in this report, future new connections are projected at 225 gpd/EDU since new connections are not anticipated to contribute any I&I to the system.

Refer to Appendix B for a table of "Ridley Creek STP Projected EDUs and Hydraulic Load", which details the specific EDUs anticipated to be connected in each of the next five years.

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### **3.3 Hydraulic Loading Projections**

PADEP has requested the 5-year hydraulic loading projections be determined using a 5-year adjusted annual average flow. Per the PADEP Chapter 94 Report Template, several tables (including Table 5 above) and steps are required to calculate the 5-year adjusted annual average flow.

Table 6 determines the 5-Year Adjusted Annual Average Flow of 0.466 MGD in accordance with the Chapter 94 Template.

<b>Table 6</b>							
<b>Year</b>	<b>AA Flow (MGD)</b>	<b>All projects connected (provide flows approved in planning modules or exemptions in MGD-include any connected projects that did not require planning)</b>					<b>Adjusted AA Flow (MGD)</b>
		2016	2017	2018	2019	2020	
2016	0.400		0.0006	0.0000	0.0000	0.0002	0.401
2017	0.415		0.0006	0.0000	0.0000	0.0002	0.415
2018	0.539				0.0000	0.0002	0.539
2019	0.513					0.0002	0.513
2020	0.461						0.461
<b>Total</b>	<b>2.327</b>					<b>Total</b>	<b>2.329</b>
<b>5-Year Average</b>	<b>0.465</b>					<b>5-Year Adj Average</b>	<b>0.466</b>

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Table 7 determines the 5-Year Adjusted Hydraulic Projection in accordance with the Chapter 94 Report Template.

<b>Table 7</b>					
<b>Adjusted Projections</b>					
<b>Year</b>	<b>Previous Year's Annual Average Flow<sup>(1)</sup></b>	<b>New EDUs</b>	<b>Increased Flow<sup>(2)</sup> (MGD)</b>	<b>Projected Annual Average Flow<sup>(3)</sup> (MGD)</b>	<b>Projected Max Month Flow<sup>(4)</sup> (MGD)</b>
2021	0.466	4	0.0009	0.467	0.548
2022	0.467	2	0.0002	0.467	0.548
2023	0.467	2	0.0005	0.467	0.549
2024	0.467	2	0.0005	0.468	0.549
2025	0.468	2	0.0005	0.468	0.550

<sup>(1)</sup> The 2021 Previous Year's Annual Average Flow is the 5-Year Adjusted Average Flow from Table 6.

<sup>(2)</sup> The Increased Flow is calculated by multiplying the number of New EDUs by the 225 gpd/EDU sewage planning flow rate.

<sup>(3)</sup> Projected Annual Average Flow = Previous Year's AA Flow + Increased Flow

<sup>(4)</sup> Projected Max Month = Projected Annual Avg. Flow x 5-Year Average Hydraulic Ratio

The Projected Annual Average Flow and the Projected Max Month Flow are below the RCSTP's annual average and maximum daily permit limit of 0.750 MGD.

#### **4.0 SEWER EXTENSIONS**

No public sewer extensions occurred in the Ridley Creek Service Area in 2020.

The proposed Reservoir Road Pump Station is designed and permitted to divert a portion of flows from the Chester Creek Interceptor (West Goshen Service Area) to the Ridley Creek Service Area. This diversion is not projected to occur within the next five years. No other future extensions are planned.

#### **5.0 PROGRAM FOR SANITARY SEWER MONITORING, MAINTENANCE, AND REPAIR**

The Township monitors daily meter readings at the treatment plant and pump stations during the week as well as daily rainfall with a rain gauge located at the Township building. Should daily flows increase, Township staff then inspect the system for leaks. Sewer lines are routinely cleaned and inspected by television cameras. The Township frequently reminds customers against discharging sump pumps into the sewer system via the Township newsletter.

The Township has eight people along with sundry equipment, all of which can be made available under emergency conditions. Should technical assistance be needed, the Authority Engineer,

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Pennoni, an engineering consulting firm with a staff of professional engineers, provides technical assistance.

The Authority utilized the services of a contract operator, Big Fish Environmental, Inc., to operate the RCSTP in 2020. This contract included daily maintenance, recording data, laboratory analysis, and submitting all reports to the Township, Authority, and the PADEP that are required under the permits.

The treatment plant alarm systems are tied into an auto dialer that has the ability to dial five numbers in succession. It begins with the plant operator and ends with the Township maintenance staff.

Routine maintenance is performed at the treatment plant on a daily basis. Maintenance includes the following:

- Grease equipment.
- All electrical equipment is inspected and cleaned by an electrical contractor twice a year.
- Wet well is cleaned and skimmed.
- Weirs are scrubbed and cleaned.
- Ultra Violet bulbs are cleaned regularly and replaced.
- All blowers are greased daily, and filters are changed twice a year.
- All pumps are pulled apart and checked for wear. Plates are typically replaced twice a year. Depending on wear, impellers may also be replaced.
- Comminutor and screen are serviced annually.
- All meters calibrated quarterly.
- Centrifuge is run with regular maintenance.

The Township has their meters checked and calibrated on a quarterly basis. The calibration reports are included in Appendix D.

### **5.1 I&I Monitoring**

The RCSTP does receive increased influent volume during wet weather. This is an indication of potential inflow and infiltration (I&I) from one or more sources including leaks in sewer joints and manholes, failed house connections, direct inflow into low manholes, and illegal connections from building sump pumps.

A Consent Order & Agreement (CO&A) was executed between the PADEP and the Authority in December 2008. The Authority, with direct assistance from the Township, agreed to investigate and remediate I&I in the collection system tributary to the RCSTP. Elements of the program outlined in the CO&A included:

1. Metering
2. Televising
3. System Hydraulic Characterization
4. Rehabilitation (as necessary)

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5. Post Rehabilitation Metering (as necessary)
6. House Lateral Investigation Program
7. Semi-annual Reporting

The five-year CO&A period expired on March 31, 2012. However, the Authority concluded that a formalized program to meter, televise, rehabilitate, and perform post rehabilitation metering had merit so they continued with the process set forth in the CO&A. A list of the sanitary sewer cleaning and televising work performed in 2020 is included in the semi-annual sewer system report in Appendix C.

## **5.2 Maintenance & Repair**

The Township has an ongoing program of repairing and/or replacing broken sewer laterals caps and stacks as they are identified. Repairs are typically performed by the Township's Public Works Department while specialty repairs and large projects are contracted to qualified firms.

In 2020, the Township performed miscellaneous repairs to the sewer system. In various areas of the Ridley Creek sewer system, 29 laterals were repaired, and 1 cleanout was repaired.

The contract operator is on-site at the treatment plant daily to check process controls, equipment hour-meter readings, influent, effluent, and process flow meter readings, and to perform process control testing, amongst other things. This information is maintained on-site in the form of daily operations reports and a bound log book. The contract operator is also responsible for notifying Township personnel, who are frequently on-site themselves, if any repairs are required. The Township is responsible for equipment repair and scheduled warranty and contract work at the plant as required.

Township staff visits the pump stations daily to check for operational problems and to perform required maintenance. The Township's normal practice is to change the pumps out twice a year for inspection and maintenance. Pump stations are drained and cleaned on a quarterly basis. The Township's electrical contractor, Lenni Electric, is on-site twice a year to inspect all of the electrical components.

## **6.0 CONDITION OF THE SEWER SYSTEM**

The RCSTP is generally operating as designed and is in good condition.

The collection and conveyance system in the Ridley Creek Service Area is in fair condition. The television inspections revealed some problems with the originally installed sanitary sewer mains. This includes cracking and damaged sections of pipe. In addition, several manholes and numerous damaged laterals and cleanouts were discovered that required repair. The Township is actively identifying and repairing aged and problematic portions of the sanitary sewer collection system.

There are no bypassing conditions or combined sanitary sewer systems within the Ridley Creek Service Area. There was one sanitary sewer overflow (SSO) reported in the Township in 2020.



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The SSO occurred at Greenhill Road due to Tropical Storm Isaias, which recorded approximately 7.90 inches of rain. Tropical Storm Isaias caused the Ridley Creek to flood resulting in a back up at the Hershey's Mill Pump Station and in sanitary sewer bubbling out of a manhole into Greenhill Road. The sanitary sewer overflow was cleaned, and no solids were evident within the overflow.

**6.1 Ridley Creek Sewage Treatment Plant Collection System Hydraulic Characterization**

The hydraulic condition of the sanitary sewer collection and conveyance system tributary to the RCSTP was analyzed in 2009 as part of the CO&A discussed in Section 5.1. A hydraulic model of the collection and conveyance system was developed to determine if any physical constraints exist that would restrict conveyance of dry weather and peak wet weather flows given existing connections at that time. The impact of flows from proposed future connections (from diverting existing flows from other collection systems into the RCSTP collection system) was also analyzed to determine if the additional flows will create any overload conditions. The flows from anticipated future connections and flow diversions into the RCSTP system (including the diversions constructed in 2013 and the future Reservoir Road Pump Station diversion) are as stated in the current Chapter 94 Report. A copy of the text from the Hydraulic Characterization report was provided as an appendix to the 2009 Chapter 94 Report. The hydraulic model projected that all sewers within the Ridley Creek Service Area had adequate capacity to convey current and future dry and wet weather flows.

**7.0 SEWAGE PUMPING STATIONS**

The Hershey's Mill Pump Station was diverted from the Chester Creek Collection System (West Goshen Service Area) to the Ridley Creek Service Area in 2013. The other pump stations in the Ridley Creek Service Area are the Hunt Country Pump Station and the influent pump station at the RCSTP.

The Average Annual Daily Flow at the Hershey's Mill Pump Station in 2020 was 74,610 gpd. The peak daily flow of 137,596 gpd was recorded on December 28, 2020 and equates to a daily peaking factor of 1.84. This peak day flow may not be the actual peak experienced within the system during 2020, since there are a number of days when flow was not recorded. Over the last five years the daily peak factor for this pump station has varied between 1.5 and 2.1. The area tributary to the Hershey's Mill Pump Station contains 367 EDUs. The 2-year projected maximum flow at the Hershey's Mill Pump Station is 137,972 gpd. The Hershey's Mill Pump Station flow rate decreased in 2020 compared to the prior 2-years to a flow rate that is comparable to the flow rates from 2014 to 2017. This is presumably due to decreased precipitation and I&I coupled with I&I repairs.

The area tributary to the Hunt Country Pump Station contains 67 single family homes, and no additional connections are expected. The pump station does not have a permanent meter. The Township replaced the pumps and other equipment at the Hunt Country Pump Station in 2016 with salvaged equipment from the demolished Reserve Pump Station. The annual average flow in Table 8 is estimated based on the 2020 average flowrate at the RCSTP of 230 gpd/EDU. Peak flows are

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calculated with a peaking factor of 4.2, which PADEP considers a typical peaking factor for a pump station of this size. Since there are no additional connections expected, the 2-year projected maximum flow at the Hunt Country Pump Station is the same as the present peak flow.

The Township intends to install a permanent flow meter at the Hunt Country Pump Station in 2020.

<b>Table 8</b>						
<b>Pump Stations</b>						
<b>Pump Station Name</b>	<b>Number of Pumps</b>	<b>Permitted Capacities</b>		<b>Present Flows</b>		<b>Projected Flows</b>
		<b>AA Permitted Capacity (gpd)</b>	<b>Hydraulic Design Capacity (excluding capacity of backup pump) (gpm)</b>	<b>Annual Average Flows (gpd)</b>	<b>Peak Flow (gpd)</b>	<b>2-Year Projected Maximum Flow (gpd) <sup>(1)</sup></b>
Hershey's Mill	2	83,000	230 gpm	74,610	137,596	137,972
Hunt Country	2	25,000		15,387	64,625	64,625

<sup>(1)</sup> 2-Year Projected Maximum Flow = 2-Year Projected AA flow \* peaking factor  
Hershey's Mill P.S. = 74,610 gpd + (1 EDUs x 225 gpd/EDU)) x 1.84 peaking factor = 137,972 gpd  
Hunt Country P.S. = Maximum 2020 Daily Flow since no connections are projected.

## **8.0 INDUSTRIAL WASTES**

Although there are presently no industrial waste contributors to the wastewater system, Chapter 188 of the Code of the Township of East Goshen addresses the strength of industrial wastes and permits only discharge of domestic strength. See Appendix E for a copy of the Township Ordinance.

## **9.0 CORRECTIVE ACTION PLAN**

The collection/conveyance system and the treatment plant are not currently and are not projected to be, hydraulically or organically overloaded. The proposed Reservoir Road Pump Station diversion will utilize most of the remaining permitted capacity at the RCSTP as per the PADEP-approved Act 537 Plan Update for the project. Therefore, no Corrective Action Plan or Connection Management Plan is required.

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**10.0 CALIBRATION REPORTS**

As required by 25 PA Code §94.12, flow measuring, indicating, and recording equipment should be calibrated annually, and the calibration report should be included in the annual report submitted under §94.12. Calibration reports are included in Appendix D.

**11.0 TRIBUTARY MUNICIPALITY REPORTS**

The tributary municipality report from Willistown Township is in Appendix F.

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**CHARTS**

Chart 1 – Ridley Creek STP Hydraulic Loading  
Chart 2 – Ridley Creek STP Organic Loading

Chart 1 - Ridley Creek STP Hydraulic Loading

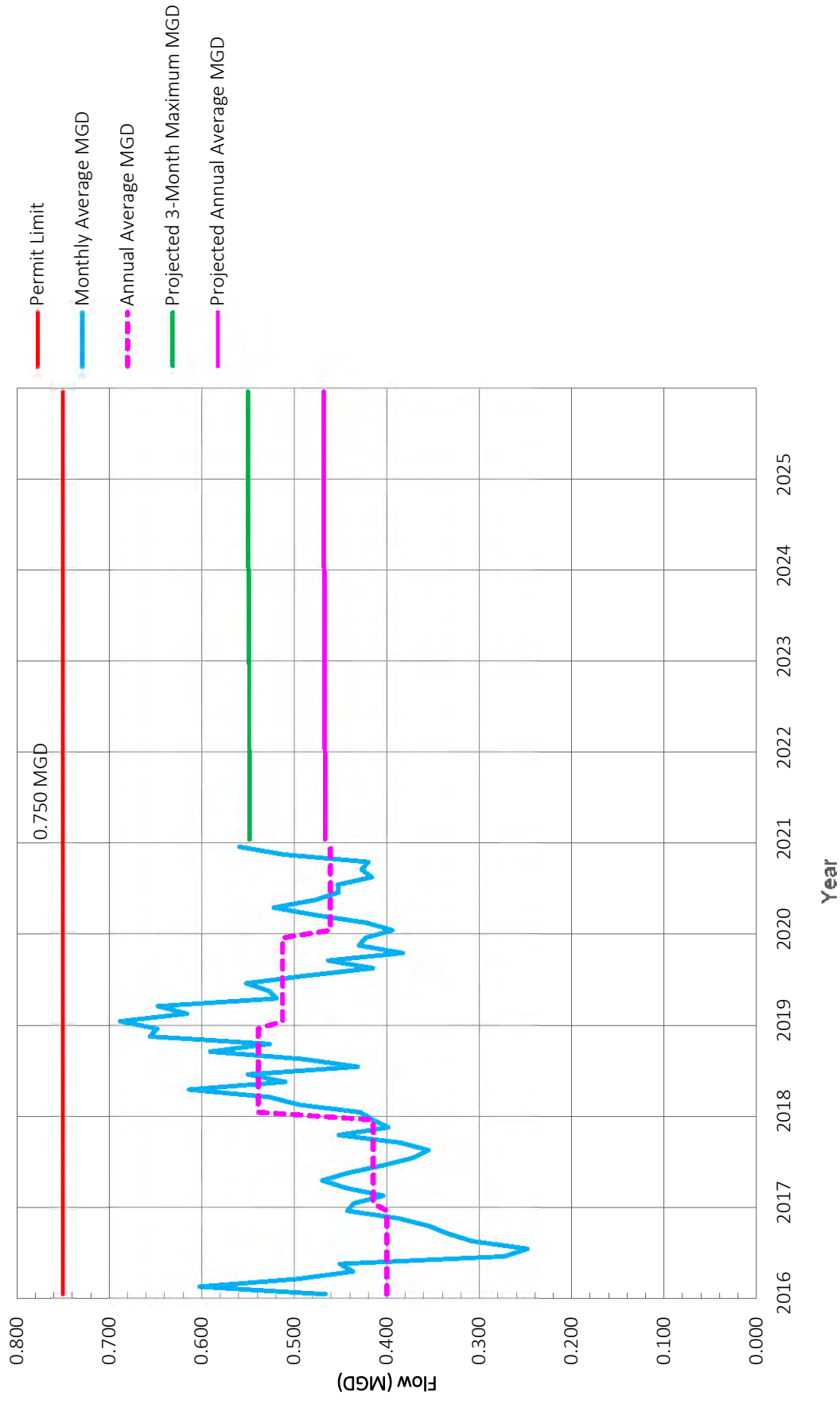
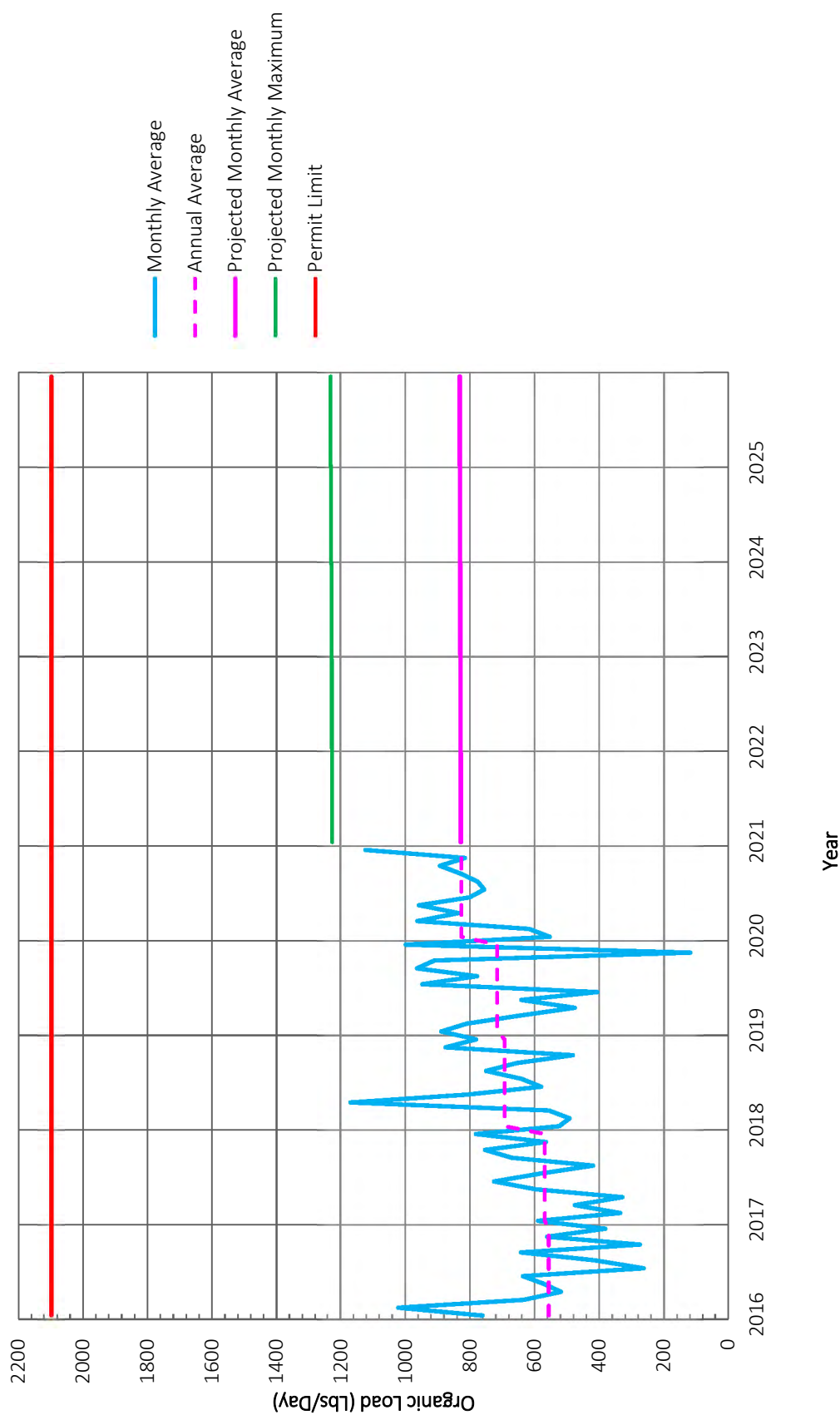


Chart 2 - Ridley Creek STP Organic Loading



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**APPENDIX A**

2020 Connections

NEW UTILITY (SEWER/REFUSE) ACCTS - 2020	
ADDRESS	Service Area
Single Resident along Line Road	Ridley Creek



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**APPENDIX B**

**5-Year Projected Connections**

**2020 Ridley Creek STP Service Area Chapter 94 Report Appendix**  
**Ridley Creek STP Projected EDUs and Hydraulic Load <sup>1</sup>**

Connections	Actual		Projected									
	2020		2021		2022		2023		2024		2025	
	EDU	(MGD)	EDU	(MGD)	EDU	(MGD)	EDU	(MGD)	EDU	(MGD)	EDU	(MGD)
1680 E. Boot Road (Knauer)			1	0.0002								
Applebrook Golf Course Learning Center			1	0.0002								
1506 Meadowbrook Lane			1	0.0002								
1040 King Road			1	0.0002								
Single Residential Property along Line Road	1	0.0002										
Other Potential Connections												
Reservoir Road P.S. Diversion					2	0.0005	2	0.0005	2	0.0005	2	0.0005
Added Flow	1	0.0002	4	0.0009	2	0.0005	2	0.0005	2	0.0005	2	0.0005
Ridley Creek STP Flow	2,007	0.4660	2,011	0.4669	2,013	0.4674	2,015	0.4678	2,017	0.4683	2,019	0.4688

<sup>1</sup> The Authority's design flow rate (225 gpd/EDU) is used for flow projections.

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**APPENDIX C**

Semi-Annual Sewer System Status Report #19

August 5, 2020

EGMAU20002

**East Goshen Municipal Authority**

**Attn:** Mark Miller, Public Works Director  
1580 Paoli Pike  
West Chester, PA 19380

**RE: Semi-Annual Sewer System Status Report #19  
East Goshen Municipal Authority**

Dear Mr. Miller:

The following Semi-Annual Sewer System Status Report is a continuation of the reports previously required under the Consent Order & Agreement (CO&A) executed between the Pennsylvania Department of Environmental Protection (PADEP) and the East Goshen Municipal Authority in December 2008. Mandatory reporting to the PADEP ended on March 31, 2012, but the reporting was requested to continue to serve as an internal reference document for the Township.

Our reports in past were formatted to describe all actions (maintenance, monitoring, etc.) taken within the previous period and those which will be taken in the subsequent monitoring period. However, this report has been reformatted to specifically address our inflow and infiltration (I & I) analysis based on the data provided by the Municipal Authority and our recommendations biased on this analysis. We have removed all action items related to televising and rehabilitation within the service areas from this report. These items are addressed in your monthly reports to the Municipal Authority and in the Annual Chapter 94 Reports. We also removed the action item related to the ongoing house lateral investigation program originally implemented in 2008. As you know this program routinely inspects properties within each service area to ensure cleanouts, vent caps, and laterals are in proper condition and any broken cleanouts, vent caps, or lateral are repaired or replaced.

This report will continue to document any suspected I & I within the service areas and provide recommendations to isolate and eliminate suspected I & I. The report is broken into three sections. Section one will address our analysis of provided portable meter data from the service areas. Section two will address an overall analysis of each service area by analyzing the permanent meter data within the service areas over a 13 month period and a five year period. Section 3 will address recommended corrective actions or investigations to implement within the service areas.

## **EXECUTIVE SUMMARY**

Permanent meter data from 2020 indicates I & I continues to occur within both the Ridley Creek and continues Chester Creek Service Areas, particularly in the subarea CC-2, as depicted in the attached Figure 1.

In the Chester Creek Service Area, the average flow from the East Goshen portion of the Chester Creek Service Area in 2020 increased by approximately 24,700 gpd (9%) compared to the average flow from 2014 to 2016, and the 2020 average flow decreased by approximately 74,500 gpd (20%) compared to the average daily flow

from 2019. The average flow from the East Goshen portion of the Chester Creek Service Area in 2019 was significantly higher than the average flow from 2014 to 2016, possibly due significant amount of rain in 2019. The total annual rainfall has been lower in 2020 (21.59 inches) than in 2019 (62.01 inches).

Seven portable meters were installed between January 2020 to June 2020 to isolate areas of I & I within the Ridley Creek Service Area. Observations and analysis from those meters are summarized in the flowing table.

*Table 1 - RCSA Portable Meter Summary Table*

Portable Meter Location	Dry-Weather Infiltration	Wet-Weather Infiltration	Inflow	Comments
MH R-589	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Minimal I & I during storm events greater than one inch
MH R-568	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Approximately 12,000 gpd unaccounted flow upstream of meter location; Recommend investigation (televising)
MH R-569	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Flows increased by up to 183% 1 to 2 days follow larger storm events (greater than 0.5-inches)
MH R-625	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Flows increased by up to 200% 1 to 2 days follow larger storm events (greater than 0.5-inches)
MH R-238	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Approximately 4,000 gpd unaccounted flow upstream of meter location; Flows increased by up to 150% during larger storm events (greater than 1 inch)
MH R-265	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No suspected I & I
Ridley Creek STP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There appears to be an error with the portable meter.

Based on the analysis we suggest the Township should focus on analysis of permanent metering in the Chester Creek Service Area and continue to install and monitor portable meters in the Ridley Creek Service Area over the next six months. Visual observation of flows within manholes during overnight hours should also continue with follow-up televising as needed.

## DEFINITIONS

**Base flow** – Base flow is the untreated wastewater discharge from residential, commercial, and industrial facilities that enter the sanitary sewer collection system to be transported to a wastewater treatment plant. This flow value does not include wastewater from inflow or infiltration and tends to fluctuate throughout the day depending on the amount of wastewater created. Typically, the lowest base flow occurs during the early hours of the morning when most people are asleep.

**Infiltration** – Infiltration occurs when groundwater seeps into sewer pipes through crack, leaky pipe joint and/or deteriorated manholes. There are two types of infiltration dry weather and wet weather infiltration. Dry weather infiltration is present if the flows in the system are greater than the base water flows during periods of little to know rain. When an area is determined to have dry infiltration investigations such as televising can occur to determine the source of the infiltration. Wet weather infiltration is present if the flows in the system significantly increase and slowly decrease one to three days after a rain event.

Inflow – Inflow is stormwater that enters the sewer system through rain leaders, basement sump pumps, or foundation drains illegally connected to the sewer during a rain event. If an area is expected to have inflow investigations such as smoke testing can occur to determine the source of the inflow.

## TEMPORARY METERING

### Ridley Creek Service Area

Six portable meters were installed between January 2020 through June 2020. Refer to the attached Figure 1 showing a map of past and future meter locations.

- Double Pond MH R-589 (Bow Tree)

A portable meter was installed within Manhole R-589 on February 8, 2019 and removed on April 16, 2019 and then re-installed in March 2020.

In the first period, the meter appears to be functioning continuously from February 8, 2019 to April 16, 2019 recording an average flow of 20,271 gpd (14.1 gpm) and a maximum flow of 81,187 gpd (56.4 gpm) resulting in a peaking factor of 5.3. The expected base flow is estimated to be 17,688 gpd based on the 2016 sewer billing records. Therefore, when comparing the average flow to the expected base flow there is approximately 3,000 gpd of unaccounted flow. From March 19, 2019 to April 16, 2019, there appears to be no dry-weather infiltration, but there does appear to be inflow and wet-weather infiltration occurring upstream of this location.

In the second period, the meter appears to be functioning continuously from March 2020 to mid-April 2020 recording an average flow of 14,098 gpd and a maximum flow of 24,668 gpd resulting in a peaking factor of 1.75. There does not appear to be any dry-weather infiltration occurring upstream of this location given that the average flow was less than the expected base flow. There are a few instances in the second period where the flow increases by around 160% during storm events greater than one inch, inducing inflow. **Therefore, it can be concluded that there is likely minimal inflow and wet-weather infiltration upstream of R-589 during wet weather conditions.**

- Eldridge MH R-568 (Bow Tree)

A portable meter was installed within Manhole R-568 on February 8, 2019 and removed on April 16, 2019 and then re-installed in March 2020 to early April.

In the first period, the meter appears to be functioning continuously from February 8, 2019 to April 16, 2019. recording an average flow of 13,606 gpd (9.45 gpm) and a maximum flow of 16,235 gpd (11.27 gpm) resulting in a peaking factor of 1.19. The expected base flow is estimated to be 12,261 gpd based on the 2016 sewer billing records. Therefore, when comparing the average flow to the expected base flow there is approximately 1,000 gpd of unaccounted flow.

In the second period, the meter appears to be functioning continuously from March 2020 to mid-May 2020 recording an average flow was 28,383 gpd and a maximum flow of 37,901 gpd resulting in a peaking factor of 1.34. Therefore, when comparing the average flow to the expected base flow there is approximately 13,000 gpd of unaccounted flow. Due to the significant increase in unaccounted flow within the last year, we question whether the meter data is indicative of continuous dry-weather infiltration. There was no correlation observed between precipitation and flow at this meter to indicate wet weather I & I. **There appears to be dry-weather infiltration occurring upstream of this meter location. We recommend an investigation of the pipes and laterals upstream of this meter location.**

- Forest Lane MH R-569 (Bow Tree)

A portable meter was installed within Manhole R-569 in mid-January 2020 to late-February 2020.

The meter appears to be functioning continuously from mid-January 2020 to late-February 2020 recording an average flow of 5,445 gpd and a maximum flow of 9,979 gpd resulting in a peaking factor of 1.83. The expected base flow is estimated to be 8,241 gpd based on the 2016 sewer billing records. There does not appear to be any dry-weather infiltration occurring upstream of this location given that the average flow was less than the expected base flow.

There was a correlation observed between precipitation and flow at this meter location. There is an instance where the flow increased by around 183% approximately 1 to 2 days following a storm. **Therefore, it can be concluded that minimal wet weather infiltration is occurring upstream of R-569.**

- Bow Tree Road MH R-625 (Bow Tree)

A portable meter was installed within Manhole R-589 on February 8, 2019 and removed on April 16, 2019 and then re-installed in March 2020.

The meter appears to be functioning continuously from March 2020 to early-April 2020 recording an average flow of 5,085 gpd and a maximum flow of 22,435 gpd resulting in a peaking factor of 4.41. The expected base flow is estimated to be 4,824 gpd based on the 2016 sewer billing records. There appears to be minimal dry-weather infiltration occurring upstream of this location given that the average flow and expected base flow are virtually the same.

There was a correlation observed between precipitation and flow at this meter location. There are a few instances where the flow increases by around 200% approximately 1 to 2 days following storm events greater than a half inch. **Therefore, it can be concluded that wet weather infiltration is occurring upstream of R-625 during wet weather conditions.**

- Line Road MH R-238

It should be noted that a portable meter was installed in this manhole in August 2014 to March 2015. The flow data from that period indicated that there was little to no infiltration upstream during dry weather periods. A portable meter was installed within Manhole R-569 in mid-January 2020 to late-February 2020 which collected about 31 days of flow data during that period. The following analysis is based on the limited data set. We suggest the portable meter be re-installed for at least 4 months for more accurate analysis.

The meter appears to be functioning continuously from mid-January 2020 to late-February 2020 recording an average flow of 51,042 gpd and a maximum flow of 80,914 gpd resulting in a peaking factor of 1.59. The expected base flow is estimated to be 47,436 gpd based on the 2016 sewer billing records. Therefore, when comparing the average flow to the expected base flow there is approximately 4,000 gpd of unaccounted flow.

Based on the limited amount of flow data during this period, there appears to be a correlation observed between precipitation and flow at this meter location. There are a few instances where the flow increases by around 120% to 150% during storm events greater than one inch. **Therefore, it can be concluded that I & I is occurring upstream of R-238 of this meter location.**

- *Sorrell Hill MH R-265*

A portable meter was installed within Manhole R-569 in mid-January 2020 to late-February 2020.

The meter appears to be functioning continuously from mid-January 2020 to late-February 2020 recording an average flow of 11,600 gpd and a maximum flow of 18,014 gpd resulting in a peaking factor of 1.55. There is no observed unaccounted flow when comparing the average daily to the expected flow of 21,909 gpd from the 2016 sewer billing records.

There is likely no I & I occurring upstream of this location. **Therefore, it can be concluded that no I & I is occurring upstream of R-265.**

- *RCSTP Portable Influent Meter*

A portable meter was installed in a doghouse manhole upstream of the Ridley Creek Sewage Treatment Plant. The portable meter was installed to validate the accuracy of the permanent "Field" influent meter for flow entering the plant. However, it appears that the average flow indicated by the portable flow meter is significantly lower than the average flow indicated by the permanent "Field" influent flow meter.

**The portable meter location should be revisited and/or the portable meter should be re-calibrated.**

### Chester Creek Service Area

No portable meters were installed in the collection and conveyance system between January 2020 through June 2020.

## PERMANENT METERING

### Ridley Creek Service Area

The permanent "field" influent meter is located on the Ridley Creek Interceptor in Manhole R-001, the first manhole upstream of the Plant. It meters all flow into the Plant's influent pump station except recycled flow. We were provided average daily flows for approximately 4 to 5 days a month from January 2019 to June 2020 as taken from the "Big Fish" monthly reports included in the East Goshen Municipal Authority meeting agendas. Additionally, we were provided average daily flow for the months of May and June 2020.

The "Big Fish" reports do not have continuous data, but we do have enough data to make a general assumption. The average flow was 464,601 gpd with a maximum flow of 741,000 resulting in a peaking factor of 1.60. There appears to be some unaccounted flow when comparing the average daily to the expected flow of 402,603 gpd from the 2016 sewer billing records. This unaccounted flow appears to occur after a significant amount of precipitation either over one day or combined over several days, thus it can be concluded that the Ridley Creek Service Area experiences I & I due to wet weather conditions. This type of infiltration can be caused by an increased groundwater table or by an increase in surface water elevation.

The additional provided average daily flows for the months of May and June 2020 indicated an average flow of 497,077 gpd and a maximum flow of 671,760 gpd resulting in a peaking factor of 0.74. There appears to be some unaccounted flow when comparing the average daily flow to the expected flow of 402,603 gpd from the 2016 sewer billing records. This unaccounted flow appears to occur after a significant amount of precipitation either over one day or combined over several days, but the limited amount of data makes it difficult to draw any conclusions regarding the cause of the unaccounted flow.



## Chester Creek Service Area

Flow data from the eight permanent meters throughout the Chester Creek Service Area were analyzed for the previous 13 months and the previous five years; six of the meters are in gravity interceptor sewers and two are on pump station discharge pipes. Instantaneous or hourly meter data is not recorded on these meters; therefore, only a rough flow analysis can be performed because inflow and instantaneous peaks, and continuous base flows are unknown.

The Westtown Way meter records the total flow from the Chester Creek Service Area including flow from West Goshen Township. The average flow at Westtown Way in 2020 was 1,046,105 gpd with the average flow from the East Goshen portion of the Chester Creek Service Area comprising 744,905 gpd (71%). East Goshen's portion of the flow in the Chester Creek Service Area has comprised approximately 72% of the total flow to the Westtown Way meter consistently from 2013 to 2018. The flow from West Goshen in 2020 averaged 301,200 gpd.

The average flow in the Chester Creek Service Area to date in 2020 was lower than the average flows in 2019. The average from the East Goshen portion of the Chester Creek Service Area in 2019 was 774,632 gpd, which is 4% higher than the average flow in 2020. The average flow from West Goshen in 2019 was 375,694 gpd, which is 20% higher than the average flow in 2020. This decrease in the flows within the Chester Creek Service Area is mostly likely caused by the decrease in rainfall between 2019 (62.01 inches) and 2020 (21.59 inches).

When analyzing the flow within the Chester Creek Service Area over the most recent 5-year period there does not appear to be any continuous infiltration. However, continuous infiltration has been observed in previous reports when analyzing portable meters data within the Chester Creek Service Area. Therefore, although there does not appear to be continuous infiltration in the overall service area there could be isolated cases within subareas. The largest spikes in the flow rate appear to be preceded by either one day of increased precipitation or several days of increased precipitation in a row. This indicates that there is I & I occurring within the system as the result of wet weather flow.

We also analyzed East Goshen's sewer billing information from 2016 compared to the flow data from the permanent meters during 2020. This analysis consisted of using the sewer billing information from 2016 to determine how many billing units were located upstream of each permanent meter. This billing unit value was then multiplied by the Chapter 94 report gpd/EDU rate from 2019 to determine the expected flow upstream of the permanent meter. This expected flow was then compared to the actual flow data from the permanent meters during 2020 to determine if there was any unaccounted flow likely caused by I & I.

In previous reports we separated the Chester Creek Service Areas into four sub-areas, as seen in Figure #1, however during this period a meter was not installed between CC-3 and CC-1. Therefore, we were unable to analyze the isolated flow from CC-3 and CC-1. However, we were able to separate CC-3 into CC-3A and CC-3B as shown in Figure #1. We can analyze CC-4, CC-2, CC-3A and combined flow from CC-3B and CC-1. Based on this analysis, CC-4 has some unaccounted flow (16,285 gpd) and the combined flow from CC-3B and CC-1 and the flow from CC-3A has little to no unaccounted flow, and the CC-2 continues to have a significant amount of unaccounted flow (184,793 gpd), consistent with prior years' analyses. Therefore, sub-area CC-2 is considered to have the highest amount of I & I and should continue to be the focus of investigations in the service area.

## RECOMMENDATIONS

The Bow Tree Development should be investigated via either televising and/or smoke testing to determine the source of the I & I observed in all four portable meters placed within the development over the previous

four months. Additionally, it should be noted that a majority of the I & I observed appears to be the result of wet weather I & I, which is the result of high groundwater table or sump pumps being connected to the sanitary sewer system.

A portable meter should be re-installed at MH R-238 on Line Road to provide a larger data set to accurately verify our analysis.

Visual observation of flows within manholes during overnight hours should also continue with follow-up televising as needed.

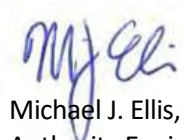
Over the next six months, the Township should install and monitor portable meters in the Chester Creek Service Area. Visual observation of flows within manholes during overnight hours should also continue with follow-up televising as needed. Additionally, the Chester Creek interceptor should be televised and/or smoke tested. We believe that a majority of the I & I occurring during wet weather conditions is occurring along the interceptor which runs adjacent to Chester Creek.

This Semi-Annual Status Reports is submitted by copy to the East Goshen Municipal Authority to describe the progress made towards achieving the previous Corrective Action milestone events. We anticipate preparation and submission of Semi-Annual Sewer System Status Report #20 by January 30, 2021.

If you should have any questions, please do not hesitate to contact me.

Sincerely,

**PENNONI ASSOCIATES INC.**

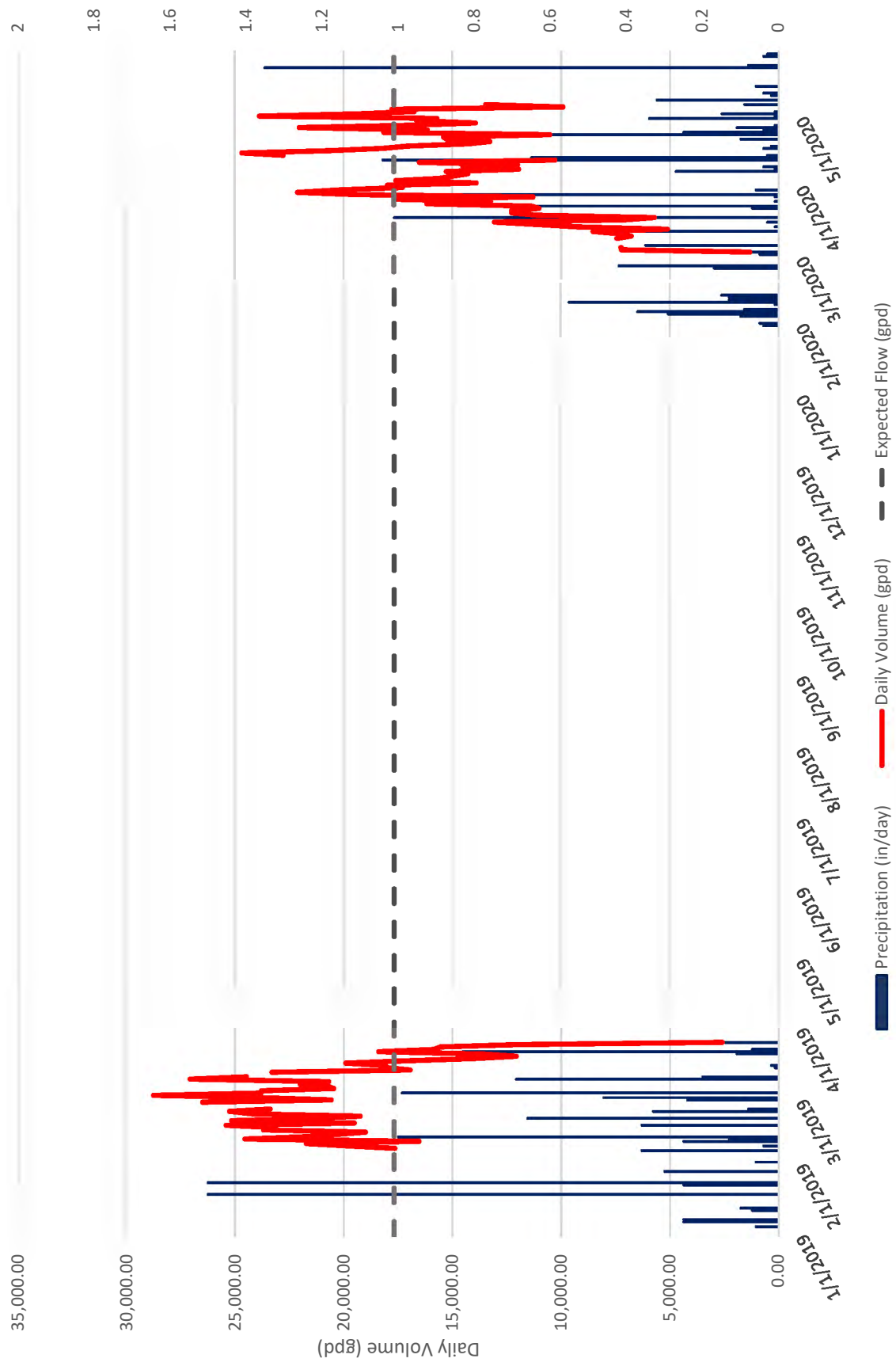


Michael J. Ellis, PE  
Authority Engineer

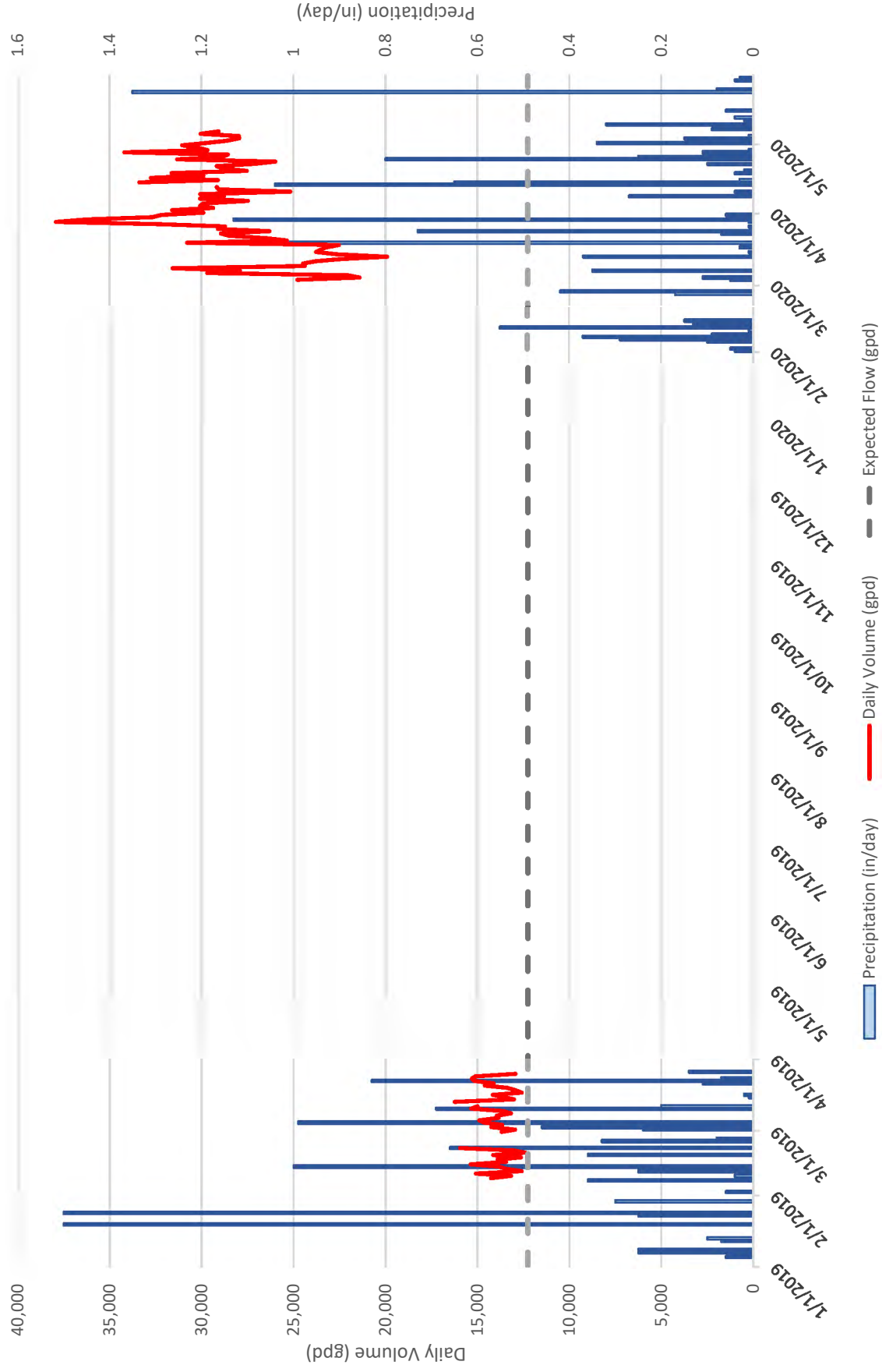
cc: Rick Smith, Township Manager  
Jon Altshul, Assistant Township Manager  
East Goshen Municipal Authority

# Double Pond MH R-589 (Bow Tree Development)

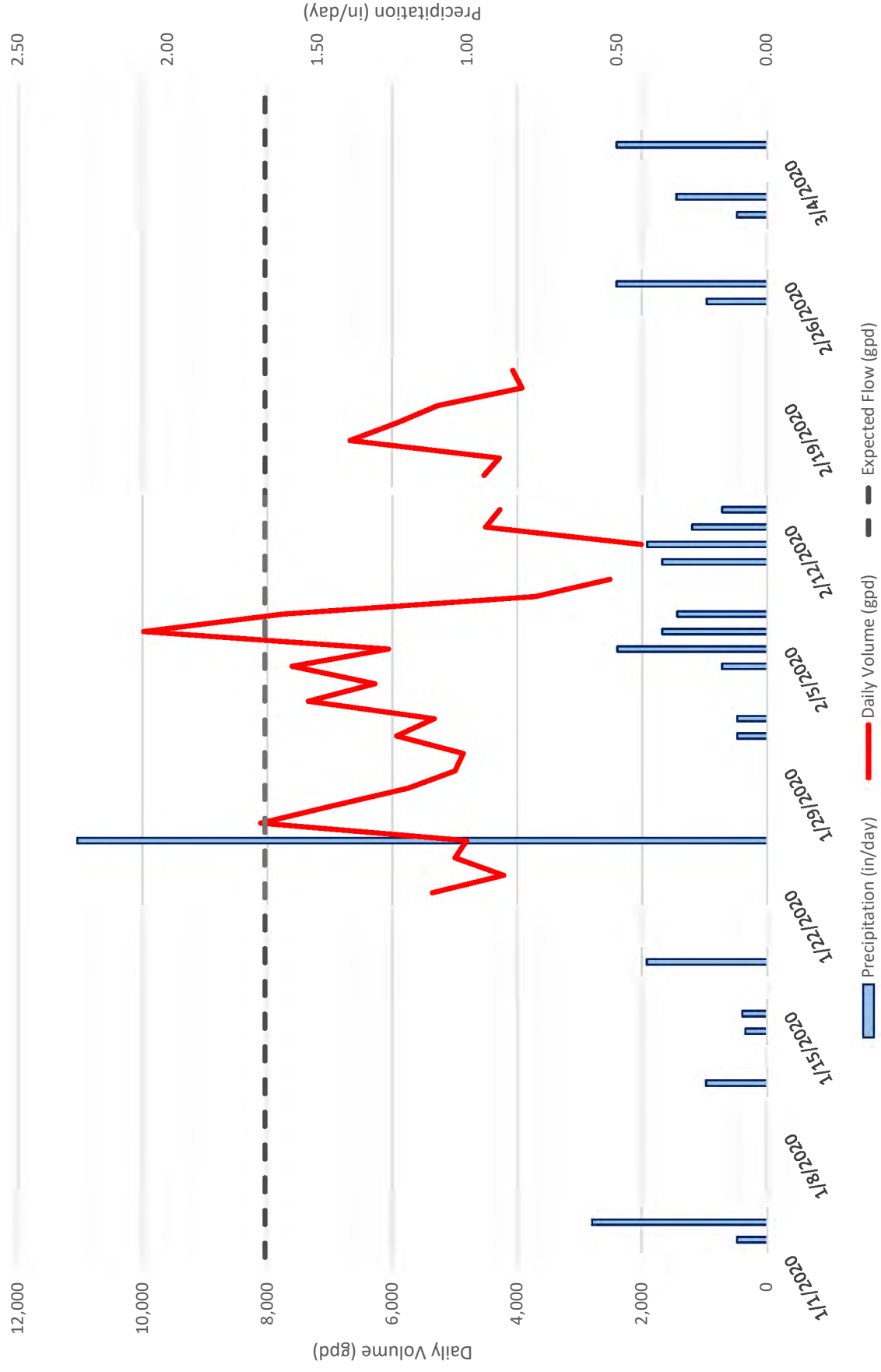
Daily Volume vs. Precipitation



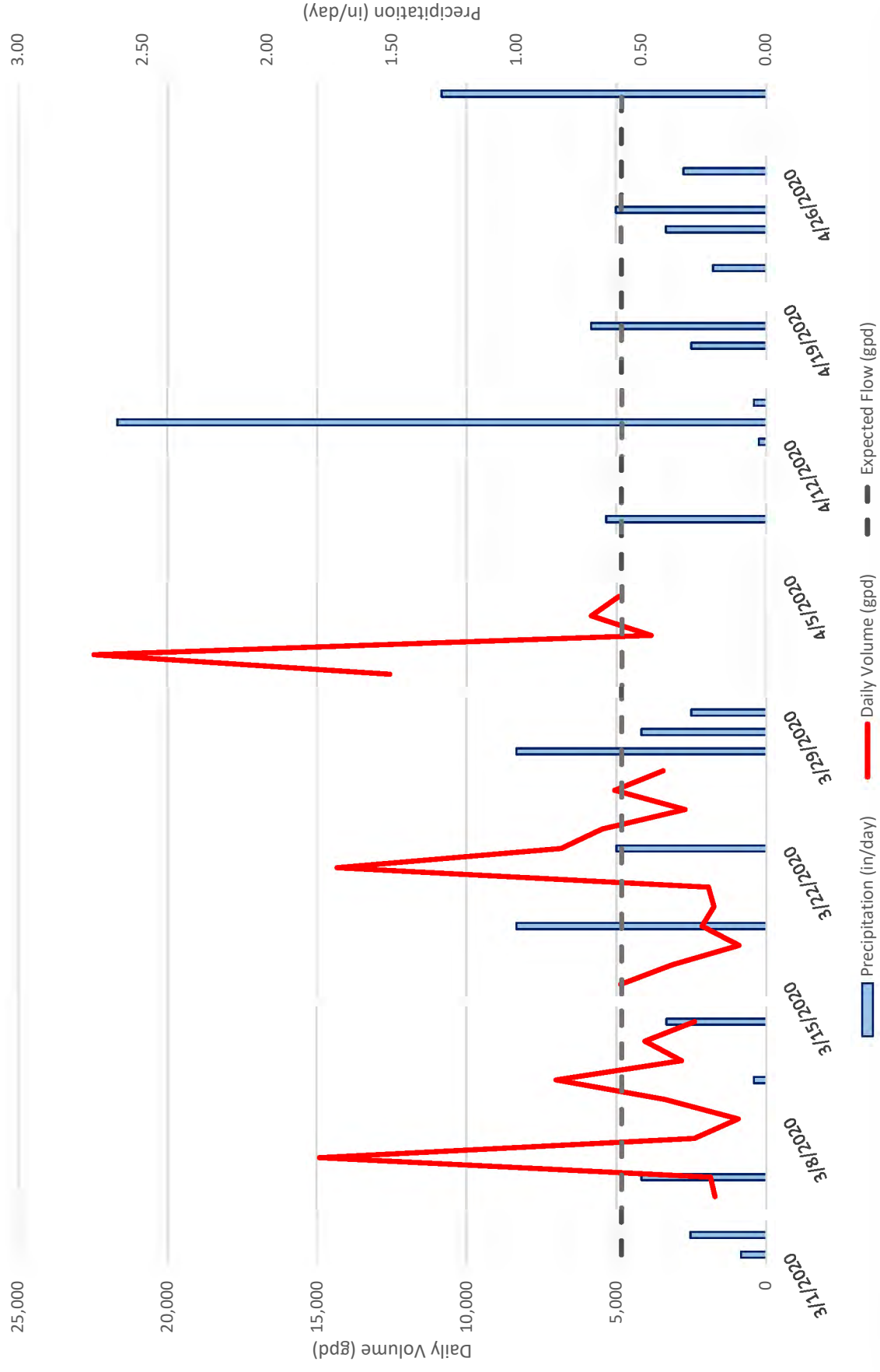
Eldridge (MH R-568)  
(Bow Tree Development)  
Daily Volume vs. Precipitation



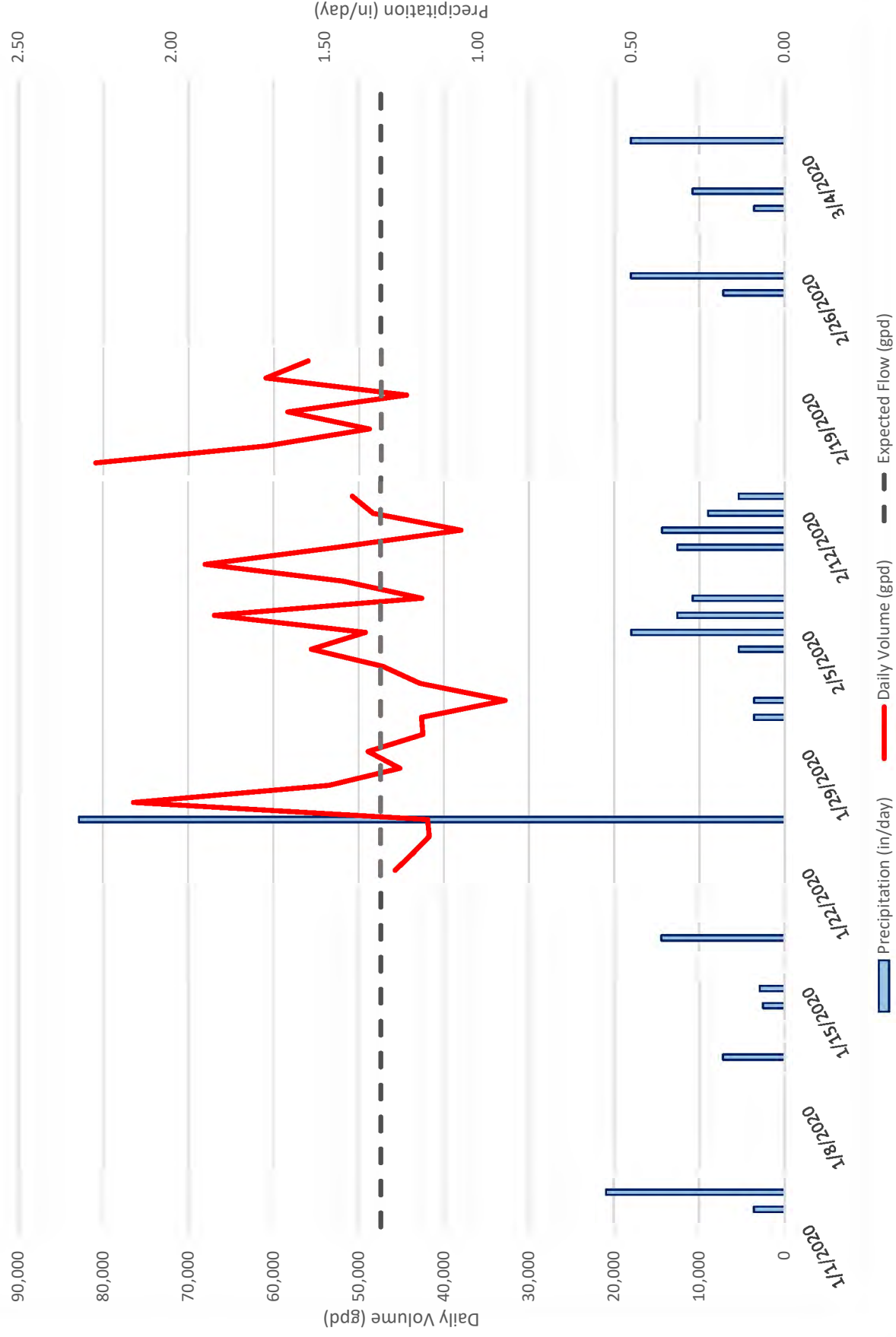
Forest Lane (MH R-569)  
(Bow Tree Development)  
Daily Volume vs. Precipitation



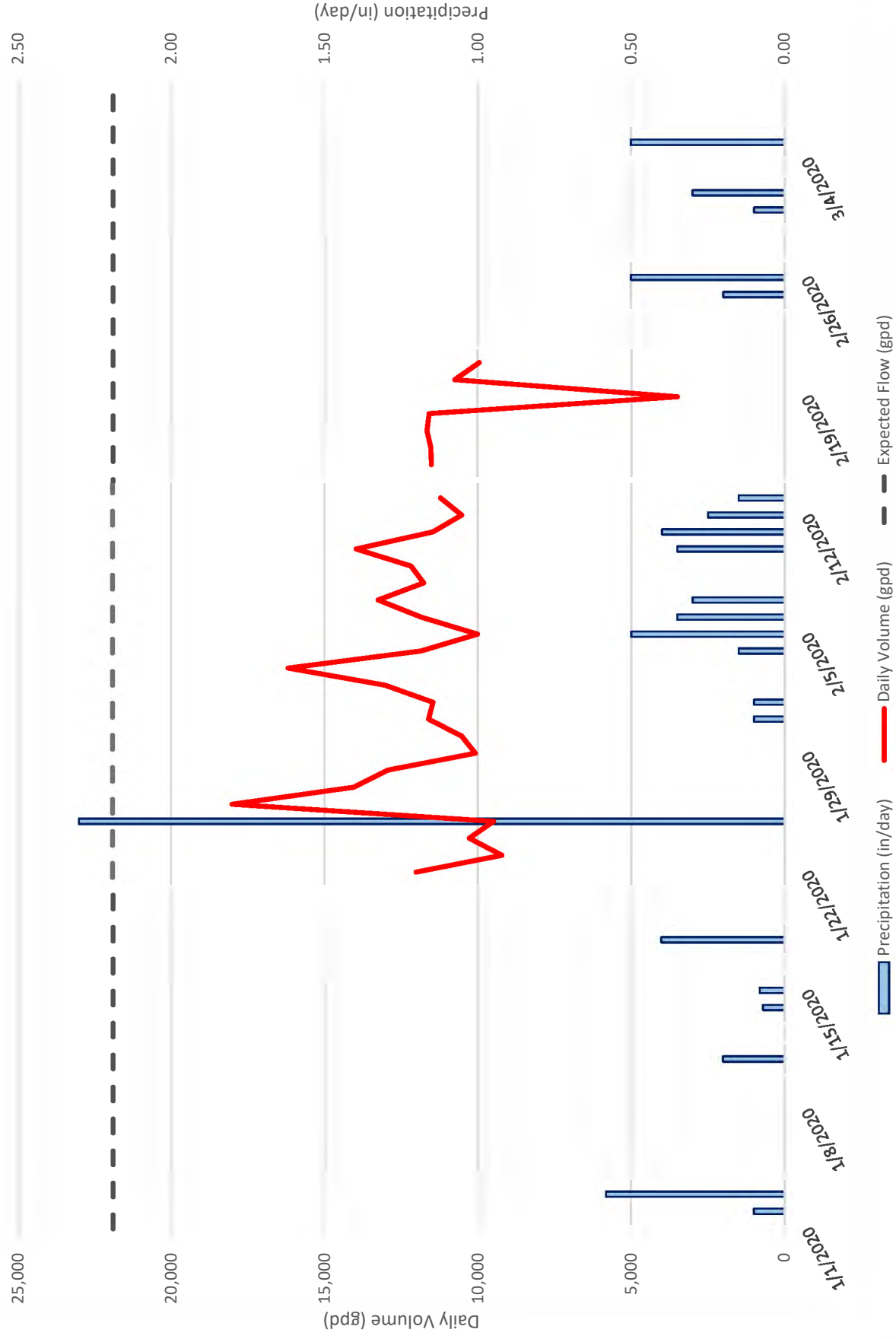
# Bow Tree Road MH R-625 (Bow Tree Development) Daily Volume vs. Precipitation



# Line Road (MH R-238) Temporary Meter Daily Volume vs. Precipitation

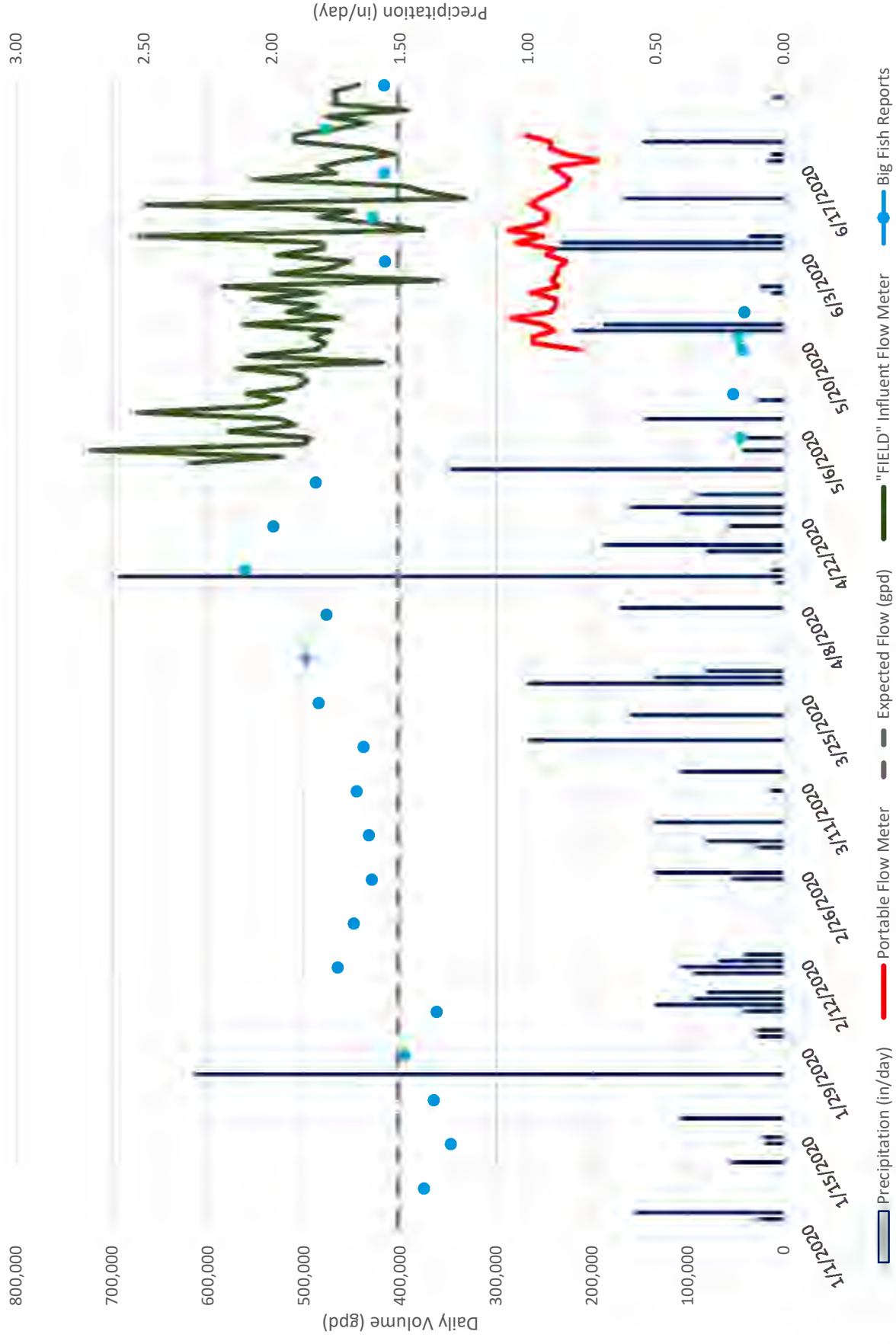


# Sorrell Hills (MH R-265) Temporary Meter Daily Volume vs. Precipitation





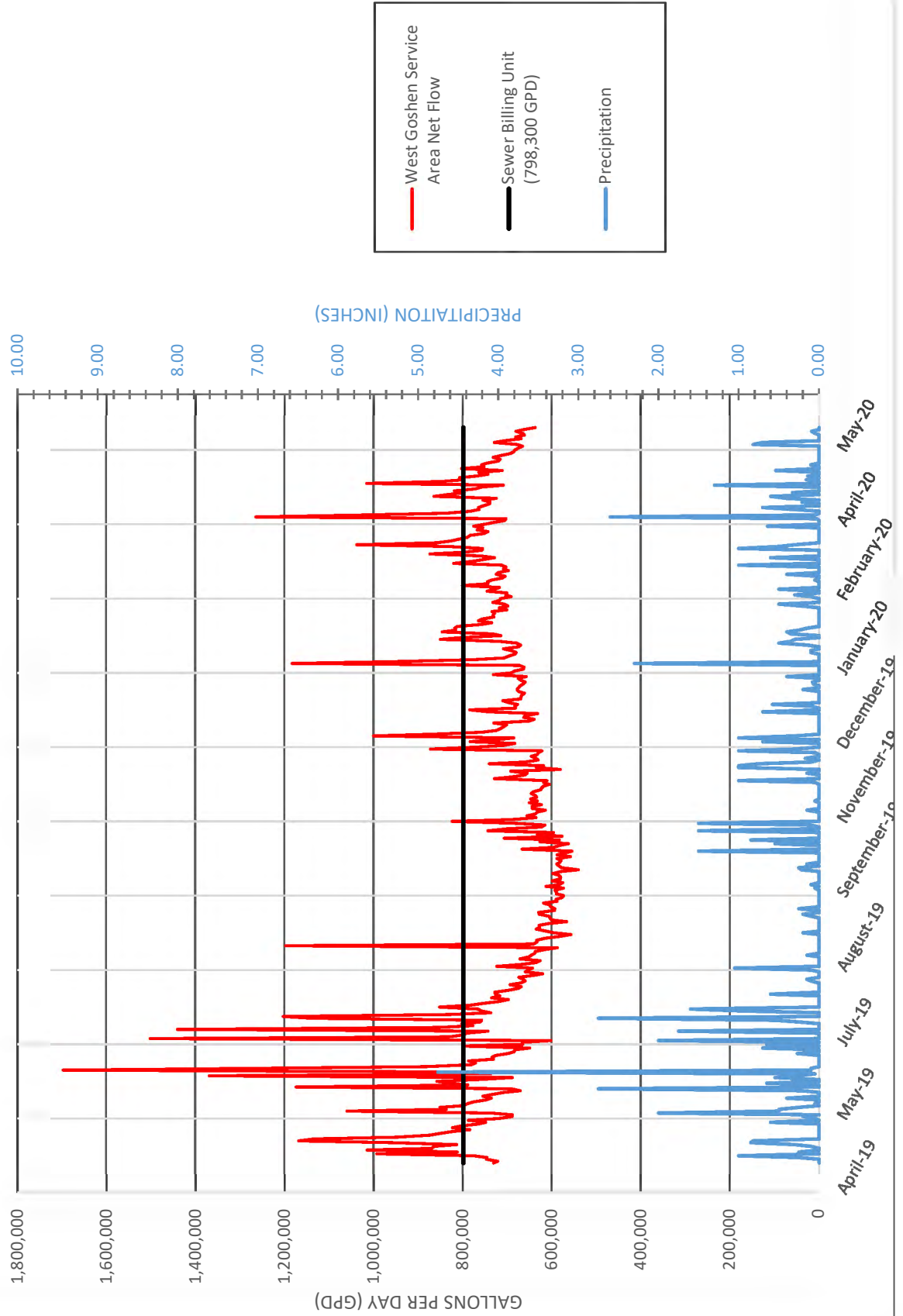
# Ridley Creek Sewage Treatment Plant Daily Volume vs. Precipitation



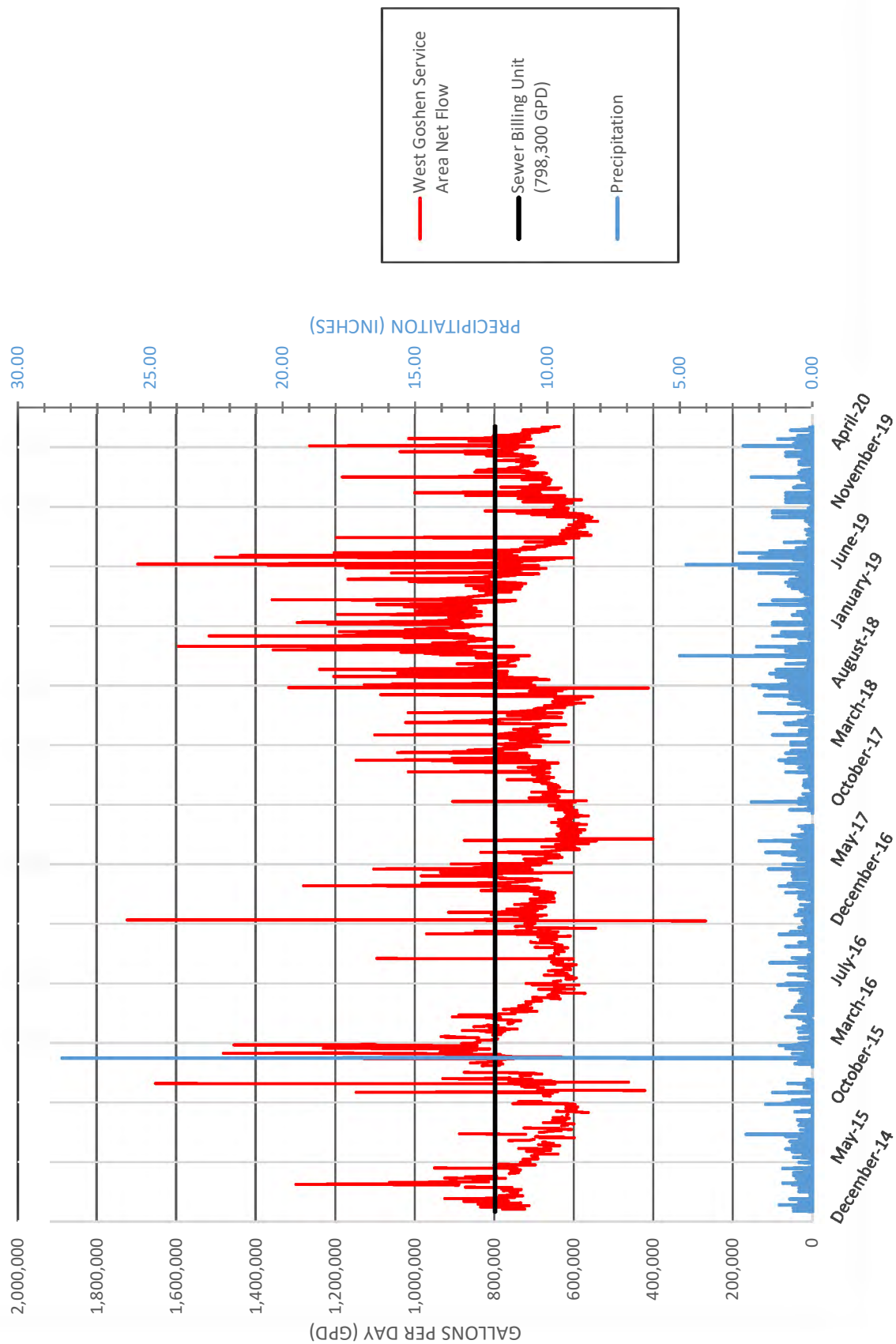
# Chester Creek Collection

## 13-Month Sanitary Sewer Flows vs. Precipitation

(May 2019 - May 2020)

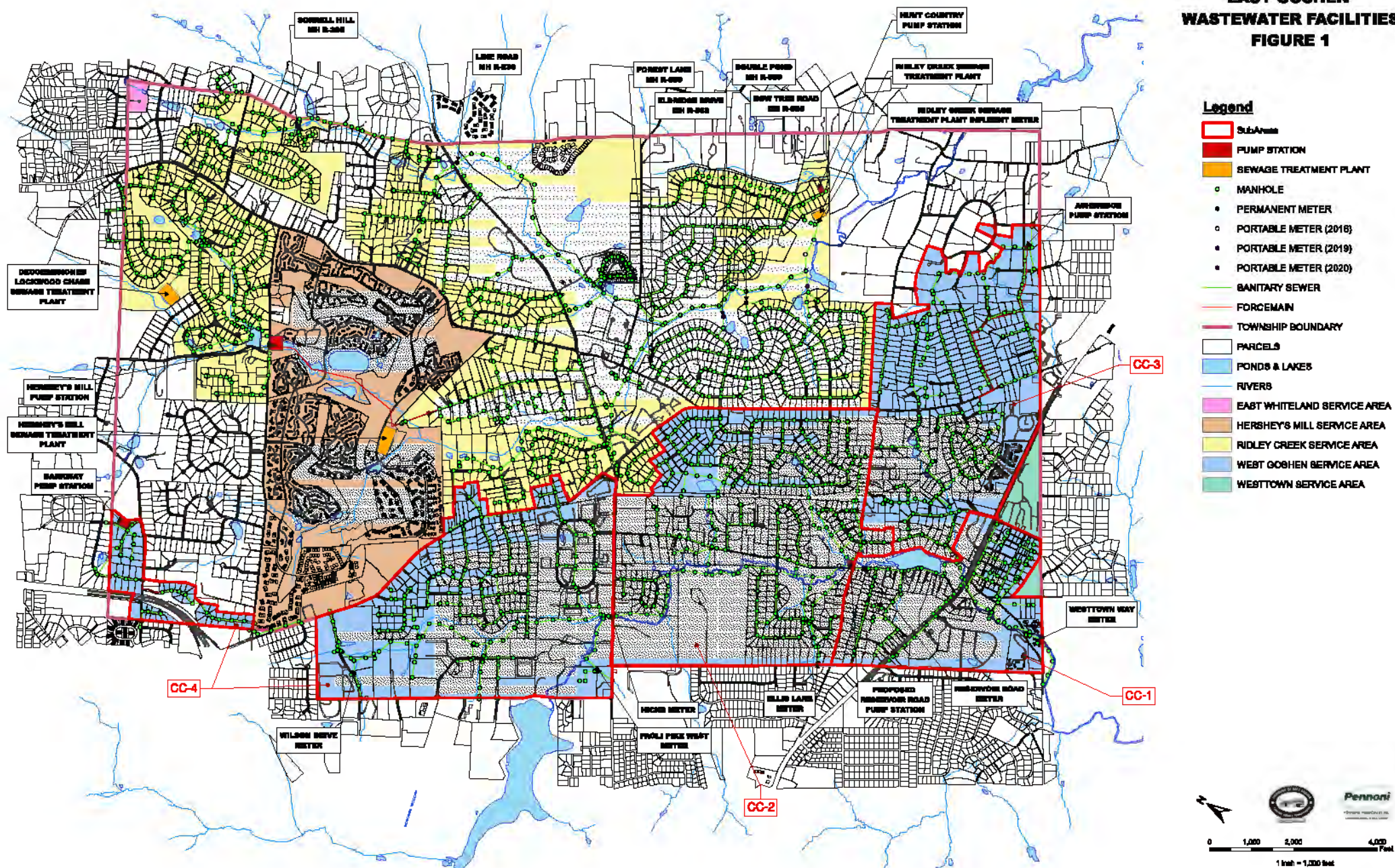


# Chester Creek Collection 5-Year Sanitary Sewer Flows vs. Precipitation (January 2015 - May 2020)





# **EAST GOSHEN WASTEWATER FACILITIES FIGURE 1**



**2020 Chapter 94 Report for Ridley Creek Sewage Treatment Plant  
East Goshen Municipal Authority  
Chester County, Pennsylvania**

**APPENDIX D**

Meter Calibration Records



**ALLIED CONTROL SERVICES, INC.**

311 GARFIELD AVE. • P.O. BOX 234 • WEST POINT, PA 19486

Phone: 215-699-2855

Fax: 215-699-9030

# INVOICE

Invoice Number:  
314792

Invoice Date:  
09/02/2020

Page:  
1

**Sold To:**

East Goshen Municipal Auth.  
1580 Paoli Pike  
West Chester, PA 19380

**SCANNED**

**Ship To:**

DEM-00-1009

Ridley STP, Westtown Way, Hickes  
Reservoir, Ellise Ave, Wilson  
Barkway, Hershey Mills

Customer ID	Customer PO	Payment Terms	
EASG01	Mark Miller	Net 30 Days	
Sales Rep ID	Shipping	Ship	Due Date
GBUCHSER	Field Service	9/2/2020	10/2/2020

Qty	P/N	Description	Unit Price	Extension
8.00	DEMAND ITM	On-site quarterly flow meter calibration services as provided by G. Buchser on 9/2/2020. Please refer to CSR #54256 for more details.	124.00	992.00
30.00	MILEAGE	Total Mileage Charge	0.88	26.40

APPROVED BY: WHS  
DATE PAID: \_\_\_\_\_  
CHECK #: \_\_\_\_\_  
CHARGED TO: 05420.3700

Check/Credit Memo No.

Subtotal	\$1,018.40
Sales Tax	0.00
Total Invoice Amount	1,018.40
Payment/Credit Applied	0.00
<b>TOTAL</b>	<b>\$1,018.40</b>





**ALLIED CONTROL SERVICES, INC.**

611 GARFIELD AVE. • P.O. BOX 234 • WEST POINT, PA 19486

Phone: 215-699-2855

Fax: 215-699-9030

62257

# INVOICE

Invoice Number:  
**314374**

Invoice Date:  
**05/18/2020**

Page:  
**1**

**SCANNED**

**Sold To:**

East Goshen Municipal Auth.  
1580 Paoli Pike  
West Chester, PA 19380

**Ship To:**

DEM-00-1009

Ridley STP, Wilson Rd, Westtown Way  
Hershey Mill, Ellise Ave, Rese  
Paoli Pike

Customer ID	Customer PO	Payment Terms	
EASG01	Mark Miller	Net 30 Days	
Sales Rep ID	Shipping	Ship	Due Date
GBUCHSER	Field Service	5/18/2020	6/17/2020

Qty	P/N	Description	Unit Price	Extension
8.00	DEMAND ITM	On-site 2nd quarter calibration services as provided by G. Buchser on 5/18/2020. Please refer to CSR #53369 for more details.	124.00	992.00
25.00	MILEAGE	Total Mileage Charge	0.88	22.00

APPROVED BY: [Signature]  
DATE PAID: \_\_\_\_\_  
CHECK #: \_\_\_\_\_  
CHARGED TO 05420-3700

Check/Credit Memo No.

Subtotal	\$1,014.00
Sales Tax	0.00
Total Invoice Amount	1,014.00
Payment/Credit Applied	0.00
<b>TOTAL</b>	<b>\$1,014.00</b>

Invoice Number:  
314118

Invoice Date:  
03/03/2020

Page:  
1



**ALLIED CONTROL SERVICES, INC.**

611 GARFIELD AVE. • P.O. BOX 234 • WEST POINT, PA 19486

Phone: 215-699-2855

Fax: 215-699-9030

SCANNED

**Sold To:**

East Goshen Municipal Auth.  
1580 Paoli Pike  
West Chester, PA 19380

**Ship To:**

DEM-00-1009

E Goshen Demand Services  
, PA

Customer ID	Customer PO	Payment Terms	
EASG01	Mark Miller	Net 30 Days	
Sales Rep ID	Shipping	Ship	Due Date
GBUCHSER	Field Service	3/3/2020	4/2/2020

Qty	P/N	Description	Unit Price	Extension
4.00	DEMAND ITM	On-site 4th site portable HACH FL9000 installation services as provided by G. Buchser on 3/3/2020. Please refer to CSR #53178 for more details.	124.00	496.00
25.00	MILEAGE	Total Mileage Charge	0.88	22.00

APPROVED BY: 

DATE PAID: \_\_\_\_\_


CHECK #: \_\_\_\_\_

CHARGED TO: 05422, 3702

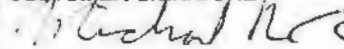
Check/Credit Memo No.

Subtotal	\$518.00
Sales Tax	0.00
Total Invoice Amount	518.00
Payment/Credit Applied	0.00
<b>TOTAL</b>	<b>\$518.00</b>

SERVICE REPRESENTATIVE



CUSTOMER SIGNATURE



MO.	DAY	YR.
3	2	20





**ALLIED CONTROL SERVICES, INC.**

GARFIELD AVE. • P.O. BOX 234 • WEST POINT, PA 19486  
Phone: 215-699-2855  
Fax: 215-699-9030

61201

**INVOICE**

Invoice Number:  
**313998**

Invoice Date:  
**01/13/2020**

Page:  
**1**

Sold To:  
East Goshen Municipal Auth.  
1580 Paoli Pike  
West Chester, PA 19380

**SCA**

Ship To: DEM-00-1009  
Forest Rd, Sorrel Hill  
and Climbers Woods

Customer ID	Customer PO	Payment Terms	
EASG01	Mark Miller	Net 30 Days	
Sales Rep ID	Shipping	Ship	Due Date
GBUCHSER	Field Service	1/13/2020	2/12/2020

Qty	P/N	Description	Unit Price	Extension
5.50	DEMAND ITM	On-site HACH FL9000 remote logger installations as provided by G. Buchser on 1/13/2020. Please refer to CSR #53151 for more details.	124.00	682.00
5.00	MILEAGE	Total Mileage Charge	0.88	22.00

APPROVED BY: WLS

DATE PAID: \_\_\_\_\_

CHECK #: \_\_\_\_\_

CHARGED TO: 05 422-3702  
05 420-3704

Check/Credit Memo No.

Subtotal	\$704.00
Sales Tax	0.00
Total Invoice Amount	704.00
Payment/Credit Applied	0.00
<b>TOTAL</b>	<b>\$704.00</b>



ALLIED CONTROL SERVICES, INC.

1 GARFIELD AVE. • P.O. BOX 234 • WEST POINT, PA 19486  
Phone: 215-699-2655  
Fax: 215-699-9030

60754

INVOICE

Invoice Number:  
313810

Invoice Date:  
12/06/2019

Page:  
1

SCANNED

Sold To:  
East Goshen Municipal Auth.  
1580 Paoli Pike  
West Chester, PA 19380

Ship To: DEM-00-1009  
Hicks

Customer ID		Customer PO	Payment Terms	
EASG01		Mark Miller	Net 30 Days	
Sales Rep ID		Shipping	Ship	Due Date
GBUCHSER		Field Service	12/6/2019	1/5/2020
Qty	P/N	Description	Unit Price	Extension
1.00	DEMAND ITM	On-site Hicks meter high flows troubleshooting services as provided by G. Buchser on 12/6/19. Please refer to CSR #53130 for more details.	119.00	119.00
15.00	MILEAGE	Total Mileage Charge	0.85	12.75

APPROVED BY: rich  
DATE PAID: \_\_\_\_\_  
CHECK #: \_\_\_\_\_  
CHARGED TO: 05420 3100

Check/Credit Memo No.

Subtotal \$131.75  
Sales Tax 0.00  
Total Invoice Amount 131.75  
Payment/Credit Applied 0.00  
  
TOTAL \$131.75



# CUSTOMER SERVICE REPORT

# **SR 54253**

## ALLIED CONTROL SERVICES, INC.

611 Garfield Avenue • P.O. Box 234, West Point, PA 19486  
24 Hour Emergency Service 800-441-4844

CUSTOMER'S ORDER NO.

REFERENCE NO.

BILL TO

CUSTOMER SITE/LOCATION

CONTACT:

CONTACT:

**REQUESTED SERVICES****CODES**

DEM	PMP	PMB
QRT	COB	CON
WAR	SAL	ENG
OTHER:		

**WORK PERFORMED****EQUIPMENT REMOVED OR DELIVERED**

DESCRIPTION/REF #

SERIAL/ID #

DEL

REM

QTY

PART/PRODUCT NUMBER

AMOUNT

APPROVED BY: WJH

DATE PAID: \_\_\_\_\_

CHECK #: \_\_\_\_\_

CHARGED TO: 05420-3780**[A] PARTS TOTAL**

LABOR (REG.) HRS@ /HR

LABOR (O.T.) HRS@ /HR

LUMP SUM:

**[B] LABOR TOTAL**

EXPENSES (TOLLS, ROOMS, MEALS)

MILEAGE \_\_\_\_\_ MILES@ /MILE

AIR AND/OR CAR RENTAL

FOLLOW-UP REQUIRED: YES ☐ NO ☐ (ATTACH CCR FORM)**[C] EXPENSE TOTAL**CERTIFICATIONS REQUIRED: YES ☐ NO ☐ NIST: YES ☐ NO ☐**[D] SHIPPING CHARGES**FUTURE ACTION/WORK REQUIRED: YES ☐ NO ☐ % COMP ☐**TOTAL [A] + [B] + [C] + [D]**

SALES TAX OR TAX ID # ( )

OTHER:

**FINAL AMOUNT DUE**

SERVICE REPRESENTATIVE

CUSTOMER SIGNATURE

MO.

DAY

YR.

9 29 20

**2020 Chapter 94 Report for Ridley Creek Sewage Treatment Plant  
East Goshen Municipal Authority  
Chester County, Pennsylvania**

**APPENDIX E**

Township Code 188: (Regarding Industrial Waste)

## Chapter 188: SEWERS

[HISTORY: Adopted by the Board of Supervisors of the Township of East Goshen as indicated in article histories. Amendments noted where applicable.]

### § 188-6. Industrial waste.

- A. Industrial wastewater discharge permit. Prior to the discharge of any industrial waste or other waste not defined as sanitary sewage into the sewer system, the discharger shall first obtain an industrial wastewater discharge permit issued by the Township.
- B. Exclusion of industrial waste:
- (1) Permissible discharges. All wastewater discharged into the sewer system shall be of a domestic strength and composition. Any wastewater which is not of domestic origin shall be pretreated to domestic strength and composition or a level acceptable to the Authority. Discharges of nondomestic strength origin will be permissible by permit only.
  - (2) The Township reserves the right to refuse connection to the sewer system, to disconnect a sewer or to compel pretreatment of industrial waste in order to prevent discharge to the sewer of industrial waste deemed to be harmful to the sewage collection system or sewage plant or to have a deleterious effect on the sewage treatment or sludge-handling processes or the receiving stream or which would cause a violation of any existing sewage treatment agreement or permit of the Township.

- C. Industrial waste rates. In the event that the Township consents to accept industrial waste into the sewer system, having total suspended solids (tss) in excess of 300 parts per million (ppm) and biochemical oxygen demand (BOD) in excess of 250 ppm the total charge shall be determined in accordance with the following formula:

Total charge =

$$Q + [(0.001 \times Q) \times (\text{BOD in ppm} - 250)] + [(0.001 \times Q) \times (\text{tss in ppm} - 300)]$$

Where:

Q	=	metered quantity charge
BOD	=	biochemical oxygen demand
tss	=	total suspended solids
ppm	=	parts per million

- D. Surcharge for extra strength **[Added 11-16-2004 by Ord. No. 129-S-04]**

The total charge for sewage having concentrations in excess of the levels set forth in Subsection C above shall be determined in accordance with the following formula: Total charge =  $Q + 0.001 Q (\text{BOD in ppm} - 250) + 0.001 Q (\text{SS in ppm} - 300)$

Q	=	Metered quantity charge (§ 188-6.C)
SS	=	Suspended solids.
ppm	=	Parts per million."

### § 188-7. Exclusion of harmful waste.

No person shall discharge into the sewer system any exhaust steam or any oils, tar, grease, gas, benzene or other combustible gases or liquids, any garbage (unless treated in an approved manner), offal, insoluble solids or other dangerous or harmful substances which would adversely affect the functioning of the sewer system or the processes of sewage treatment or the receiving stream.

## **ARTICLE IV Pretreatment Standards and Regulations for Industrial Wastewater Discharges [Adopted 11-6-2004 by Ord. No. 129-S-04]**

### **§ 188-35. Legislative intent.**

- A. East Goshen Township entered an intermunicipal agreement with West Goshen Township on February 28, 1996, titled, "Agreement Between West Goshen Township and East Goshen Township Governing Compliance with Implementation and Enforcement of Industrial Waste Pretreatment Regulations" (the "agreement") whereby West Goshen Township agreed to accept sanitary sewage from East Goshen Township into the West Goshen Township Wastewater Treatment Plant. Pursuant to the Agreement, East Goshen Township is required to develop, implement and enforce a federally mandated pretreatment program in compliance with the federal regulations (codified at 40 Code of Federal Regulations Part 403) to control wastewater discharges from all industrial users in East Goshen Township whose sewage is discharged into the West Goshen Township Sewage Collection System for treatment at the West Goshen Township Wastewater Treatment Plant.
- B. The East Goshen Township Municipal Authority currently owns the Ridley Creek Sewer Treatment Plant along Towne Drive and the Lockwood Sewer Treatment Plant along Dolphin Drive (collectively, the "East Goshen Plants") which the Municipal Authority leases to the Township. As of the effective date of this article, the East Goshen Plants do not accept sewage from any industrial users. If in the future the Township and the East Goshen Township Municipal Authority agree to accept industrial waste for treatment at the East Goshen Plants, the regulations set forth in this Article IV shall apply and such industrial user(s) shall comply with all standards and regulations in this Article IV.

### **§ 188-36. Definitions; word usage.**

- A. Unless the context specifically indicates otherwise, the following terms and phrases, as used in this article, shall have the meanings hereinafter designated.

ACTS — The Federal Water Pollution Control Act, as amended, also known as the "Clean Water Act," as amended, 33 U.S.C. § 1251 et seq. (the "Act"); and the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. (1965) 1535, as amended (the Sewage Facilities Act).

APPROVAL AUTHORITY — The Environmental Protection Agency (EPA), Region III.

AUTHORIZED REPRESENTATIVE OF USER — An authorized representative of a user is:

- (1) A principal executive officer of at least the level of vice president if the user is a corporation.
- (2) A general partner or proprietor if the user is a partnership or proprietorship, respectively.
- (3) A principal executive officer or a person having responsibility for the overall operation of the user's facility if the user is a governmental agency, unincorporated organization or other similar entity.
- (4) A duly authorized representative of the individual designated in Subsections (1) through (3) above if:
  - (a) The authorization is made in writing;
  - (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and
  - (c) The written authorization is submitted to the East Goshen Township Sewer Manager.

AVERAGE DAILY FLOW — The wastewater discharge volume for the most recent calendar month

divided by the number of calendar days in that month.

**BOD** (denotes "biochemical oxygen demand") — The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure for five days at 20° C., expressed in terms of weight and concentration [milligrams per liter (mg/L)]. The standard laboratory procedure shall be found in the latest edition of Standard Methods for the Examination of Water and Sewage, published by the American Public Health Association.

**BYPASS** — The intentional diversion of waste streams from any portion of an industrial user's facility for pretreatment.

**CATEGORICAL INDUSTRY** — Any industry subject to pretreatment standards as specified in 40 CFR (the "United States Code of Federal Regulations"), Chapter 1, Subchapter N, establishing quantities or concentrations of pollutants or pollutant properties which may be discharged or introduced to a treatment plant by existing or new industrial users in specific industrial subcategories.

**CATEGORICAL STANDARDS** — National Categorical Pretreatment Standards.

**COD** (denotes "chemical oxygen demand") — The quantity of oxygen, expressed in mg/L, required to chemically oxidize the organic and inorganic matter in a water or wastewater sample under the standard laboratory procedure. The standard laboratory procedure shall be that in the latest edition of Standard Methods for the Examination of Water and Sewage, published by the American Public Health Association.

**COMPATIBLE POLLUTANT** — BOD, COD, total suspended solids, total Kjeldahl nitrogen, total phosphorus, fecal coliform bacteria and oil and grease.

**COMPOSITE SAMPLE** — The sample resulting from the combination of individual wastewater samples taken at selected intervals based on an increment of either flow or time.

**CONTROL AUTHORITY** — The East Goshen Township Board of Supervisors.

**ENGINEER** — Any consulting engineer appointed by East Goshen Township or the East Goshen Municipal Authority.

**EPA** — The United States Environmental Protection Agency, including, where appropriate, the Administrator or other duly authorized official of said agency.

**EXTRA-STRENGTH WASTEWATER** — A wastewater having total suspended solids (tss) in excess of 300 parts per million (ppm) and biochemical oxygen demand (BOD) in excess of 250 ppm, which may be acceptable for discharge to the sewerage system, subject to prior approval of the Sewer Manager and the discharger's payment of a surcharge as established in this article. The concentration levels set forth in this definition may be revised from time to time by resolution of the control authority.

**GARBAGE** — Solid wastes from the domestic and commercial preparation, cooking and dispensing of food and from the commercial handling, storage and sale of produce.

**GRAB SAMPLE** — A sample which is taken from a waste stream on a one-time basis, with no regard to the flow in the waste stream, over a period of time not to exceed 15 minutes.

**INDUSTRIAL USER** — Any person discharging anything other than domestic waste to the sewerage system.

**INDUSTRIAL WASTEWATER** — Any water which, during a manufacturing or processing operation, including those regulated under Sections 307(b), (c) or (d) of the Act, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product, or any other water contaminated by an industrial and/or commercial process, and distinct from domestic wastewater.

**INDUSTRIAL WASTE DISCHARGE PERMIT** — A permit authorizing a person to deposit or discharge industrial wastewater into the sewerage system.

**INTERFERENCE** — A discharge which alone or in conjunction with a discharge or discharges from

other sources inhibits or disrupts the treatment, conveyance, processes or operations of the sewerage system or a decrease in treatment efficiency or which contributes to a violation of any requirement of an NPDES permit, or which prevents the use or disposal of sewage sludge in compliance with any of the following statutory or regulatory provisions or permits issued thereunder: Section 405 of the Act (33 U.S.C. § 1317), any criteria, guidelines or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), including Title II and Title IV, commonly referred to as the "Resource Conservation and Recovery Act" (RCRA), the Clean Air Act, the Toxic Substances Control Act and the Marine Protection, Research and Sanctuaries Act.

**LOCAL DISCHARGE LIMITS** — Numerical limitations on the concentration, mass or other characteristics of wastewater, wastes or pollutants discharged to the sewerage system by industrial users, and which are developed by East Goshen Township in compliance with National Categorical Pretreatment Standards, National Prohibitive Discharge Standards or other applicable federal and state regulations. For users who are connected to the West Goshen Township Sewerage System, the local discharge limits shall be developed by West Goshen Township in compliance with National Categorical Pretreatment Standards, National Prohibitive Discharge Standards or other applicable federal and state regulations.

**MILLIGRAMS PER LITER (mg/L)** — The ratio of weight to volume expressing the concentration of a specified component in a wastewater; also known as "parts per million" (PPM).

**MUNICIPAL AUTHORITY** — The East Goshen Township Municipal Authority.

**NATIONAL CATEGORICAL PRETREATMENT STANDARD** — Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with Section 307(b) and (c) of the Act (33 U.S.C. § 1317), as from time to time amended, and which are defined in 40 CFR Chapter 1, Subchapter N, Parts 405-471, as from time to time amended.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT or NPDES PERMIT** — A permit issued pursuant to Section 402 of the Act (33 U.S.C. § 1342), as from time to time amended.

**NATIONAL PROHIBITED DISCHARGE STANDARD OR PROHIBITED DISCHARGE** — Any regulation developed under the authority of Section 307(b) of the Act and 40 CFR 403.5.

**NEW SOURCE** — Any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Categorical Pretreatment Standards under Section 307(c) of the Act, which standards will be applicable to such source if such categorical standards are thereafter promulgated in accordance with that section. Determination of the applicability of new source standards shall be made as provided in the Act and 40 CFR 403.3.

**NONCONTACT COOLING WATER** — Water used for cooling purposes which does not come into direct contact with any raw material, intermediate product, waste product or finished product.

**OWNER** — Any person vested with ownership, legal or equitable, sole or partial, of any property, or his agent.

**PASS-THROUGH** — Discharge through the sewerage system which exists in quantities or concentrations, alone or with discharges from other sources, which causes a violation of any condition of an NPDES permit issued to a municipality or municipal authority, including an increase in magnitude or duration of a violation.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)** — The Department of Environmental Protection of the Commonwealth of Pennsylvania, or any department or agency of the commonwealth succeeding to the existing jurisdiction or responsibility of that Department.

**PERSON** — Any individual, firm, company, partnership, copartnership, corporation, association, joint-stock company, trust, estate, group, society or other legal entity whatsoever, government entity, either commonwealth or local, and their agencies, commissions, departments and instrumentalities, or the legal representatives, heirs, successors and assigns thereof.

**pH** — The logarithm of the reciprocal of the hydrogen-ion concentration expressed as moles per liter,



which indicates the degree of acidity or alkalinity of a substance.

**POLLUTANT** — Any dredged soil, solid waste, incinerator residue, sewage, sewage sludge, garbage, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt or industrial, municipal and agricultural waste discharged into water.

**PRETREATMENT** — The reduction of the amount of pollutants, the elimination of pollutants or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into the sewerage system. The reduction or alteration may be obtained by physical, chemical or biological processes, process changes or by other means, except as prohibited by the Federal Water Pollution Control Act and 40 CFR 403.6(d), as amended from time to time.

**PRETREATMENT COORDINATOR** — The East Goshen Township Sewer Manager or authorized designee. For users who are connected to the West Goshen Township Sewerage System, West Goshen Township or its Sewer Manager shall serve as the pretreatment coordinator.

**PRETREATMENT REQUIREMENT** — Any substantive or procedural requirement related to pretreatment, other than a pretreatment standard imposed on an industrial user.

**PRETREATMENT STANDARD** — Any regulation containing pollutant discharge limits promulgated by the control authority in accordance with Sections 307(b) and (c) of the Act, or by East Goshen Township, which applies to industrial users. This term includes National Categorical Pretreatment Standards, local discharge limits and prohibited discharge limits established by this article or other regulatory authority having jurisdiction.

**QUALIFIED PROFESSIONAL** — A registered professional engineer skilled in the field of wastewater treatment.

**SANITARY SEWAGE, DOMESTIC SEWAGE or SEWAGE** — The normal water-carried household and toilet wastes from residences, businesses, buildings, institutions and commercial and industrial establishments.

**SEWERAGE SYSTEM or SEWER SYSTEM** — All facilities leased by the Township from the Municipal Authority and operated by the Township for the collection, transportation, treatment or disposal of sanitary sewage. For users in East Goshen Township whose sewage is treated by West Goshen Township pursuant to an intergovernmental agreement dated February 26, 1996, such term shall include the West Goshen Township Sewerage System as defined herein.

**SIGNIFICANT INDUSTRIAL USER** — Any industrial user that is subject to National Categorical Pretreatment Standards: or discharges 25,000 gallons or more per day of industrial wastewater; or contributes a waste stream which makes up 5% or more of the average dry weather hydraulic or organic (compatible pollutant) capacity of the sewerage system; or any other industrial user that is designated as such by the pretreatment coordinator on the basis that the industrial user has a reasonable potential to adversely affect the sewerage system by interference, pass-through of pollutants or sludge contaminations sufficient to endanger the sewerage system or Township personnel or to violate any applicable pretreatment standard. By definition, every significant industrial user is an industrial user.

**SIGNIFICANT NONCOMPLIANCE (SNC)** — An industrial user is in significant noncompliance if it violates one or more of the following criteria:

- (1) Chronic violations of wastewater discharge limits, defined as those in which 66% or more of all the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant.
- (2) Technical review criteria (TRC) violations, defined as those violations in which 33% or more of all of the measurements for each pollutant taken during a six-month period equal or exceed the product of the daily average maximum limit or the average limit times the applicable TRC (TRC-1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants, except pH).

- (3) Any other violation of a pretreatment standard or requirement (daily maximum or longer-term average) that the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, determines has caused, either alone or in combination with other discharges, an interference or pass-through in the sewerage system.
- (4) Any discharge of a pollutant that has caused imminent endangerment to the health of the Township personnel, the environment or the general public; or has resulted in exercising any emergency authority to halt or prevent such a discharge.
- (5) Failure to meet, within 90 days after the scheduled date, a compliance schedule date or a compliance schedule milestone contained in the user's industrial waste discharge permit or enforcement action for starting construction, completing construction or attaining final compliance.
- (6) Failure to accurately and timely report incidents of noncompliance.
- (7) Any one or more violations of this article not otherwise specified in this definition, any regulation promulgated pursuant to the authority herein authorized or any regulations imposed by EPA in the implementation and/or enforcement of this article, provided that prior to any enforcement action by the Township, it shall give 30 days' prior written notice to the permittee of the alleged violation and provide the permittee a period of 60 days to correct the violation, unless the violation constitutes in the Sewer Manager's reasonable discretion an emergency presenting a threat of imminent harm to the treatment plant or other municipal sewerage facilities.
- (8) Failure to provide within 30 days after the due date any required reports, such as baseline monitoring reports, ninety-day compliance reports, periodic self-monitoring reports and reports on compliance with compliance schedules.

**SLUG LOAD** — Any discharge at a flow rate or concentration that may cause a violation of any pretreatment requirement or pretreatment standard set forth in this article.

**SLUG CONTROL PLAN** — A report prepared by an industrial user and provided to the Township in accordance with this article which details the existing and proposed facility plans and operating procedures to be followed by that user in the event of a slug load.

**STANDARD INDUSTRIAL CLASSIFICATION (SIC)** — A classification pursuant to the latest Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget.

**STANDARD METHODS** — The latest edition of Standard Methods for the Examination of Water and Wastewater (Standard Methods), a manual published by the American Public Health Association specifying analytical procedures for testing and analysis of wastewater.

**STATE** — Commonwealth of Pennsylvania.

**STORMWATER** — Any flow occurring during or following any form of natural precipitation and resulting exclusively therefrom.

**SURCHARGE** — An additional charge for the treatment of extra-strength wastewater in excess of the basic charge for the treatment of wastewater.

**TOTAL SUSPENDED SOLIDS (TSS)** — The total suspended matter that either floats on the surface of, or is in suspension in, water or wastewater and is removable by laboratory filtration as prescribed in Standard Methods.

**TOTAL KJELDAHL NITROGEN (TKN)** — The sum of the organic nitrogen and ammonia nitrogen present in wastewater, as measured by standard laboratory procedure as described in Standard Methods.

**TOWNSHIP** — East Goshen Township, a political subdivision of the Commonwealth of Pennsylvania.

**USER** — Any person who contributes wastewater into the sewerage system.

**WASTEWATER** — The combined flow of sanitary sewage and industrial wastewater, together with such quantities of infiltration and inflow as may be present.

**WEST GOSHEN TOWNSHIP** — A political subdivision of the Commonwealth of Pennsylvania who, pursuant to an intermunicipal agreement with West Goshen dated February 28, 1996, has agreed to accept sanitary sewage from East Goshen Township for treatment at the West Goshen Township Wastewater Treatment Plant.

**WEST GOSHEN TOWNSHIP SEWERAGE SYSTEM** — The sewage collection and treatment system of West Goshen Township and West Goshen Township Sewer Authority and any pipe, conduit or other equipment which carries wastewater to the West Goshen Township publicly owned treatment plant (POTW) or any of its component parts.

- B. Words in the present tense include the future. The singular number includes the plural number. The plural number includes the singular number. The word "shall" is mandatory, while the word "may" is permissive.

**§ 188-37. Prohibitions and restrictions on all users.**

Except as otherwise provided in this article, no user shall discharge or cause to be discharged to the sewerage system any sewage, industrial wastewater or other matter or substance:

- A. Having a temperature which will inhibit biological activity in the sewerage system resulting in interference, but in no case with a temperature at the introduction into the sewerage system which exceeds 120° F. or is less than 40° F., and in no case heat in such quantities that the temperature of the influent to the POTW exceeds 104° F.
- B. Containing petroleum oils, nonbiodegradable cutting oils or other products of mineral origin, animal fats, oil, wax or grease or other similar substances (collectively called "oil and grease") in amounts that will cause pass-through or interference.
- C. Containing any liquids, solids or gases at concentrations which are, or may be sufficient, either alone or by interaction with other substances, to cause fire or explosion or be injurious in any other way to the sewerage system or to the operation of the POTW. Prohibited materials include, but are not limited to, gasoline, fuel oil, kerosene, naphtha, paint products, sulfides and any substance having a closed cup flashpoint of less than 140° F. using the test methods specified in 40 CFR, Chapter 1, Subpart C, Section 261.21.
- D. Containing solid or viscous substances at concentrations which will cause obstruction to the flow in a sewer or other interference, such as but not limited to ashes, cinders, spent lime, stone dust, sand, mud, straw, shavings, metals, glass, rags, grass clippings, feathers, tar, plastics, wood, whole blood, paunch manure, bentonite, lye, building materials, rubber, asphalt residues, hairs, bones, leather, porcelain, china, ceramic wastes, polishing wastes or glass grindings.
- E. Having a pH, stabilized, lower than 6.0 or higher than 9.0 or having any other corrosive or scale-forming property capable of causing damage or hazard to structures, equipment, bacterial action or personnel of the sewerage system.
- F. Containing pollutants, including oxygen-demanding pollutants, (BOD etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, may injure or cause either interferences or a pass-through or interference in the sewerage system, constitute a hazard to humans, animals, plants, create a toxic effect in the receiving waters of the POTW or exceed any limitation set forth in a National Categorical Pretreatment Standard.
- G. Containing any noxious or malodorous liquids, gases or solids which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or result in toxic gases, vapors or fumes in the sewerage system in a quantity that will cause worker health and safety problems.
- H. Containing objectionable color not removed in the treatment process, such as but not limited to dye

wastes and vegetable tanning solutions.

- I. Containing radioactive substances of such half-life or concentration as may exceed limits which are prohibited by applicable state or federal regulations.
- J. Prohibited by any permit, statute, rule, regulation, ordinance or resolution issued or promulgated by the Township or any public agency having jurisdiction, including the state and the EPA.
- K. Containing any substance which will cause the sewerage system to violate the Municipal Authority's NPDES permit, the West Goshen Township Sewer Authority's NPDES permit (for users who are connected to the West Goshen Township Sewerage System) or the receiving water quality standards.
- L. Containing any substance which shall cause the sewerage system to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under Section 405 or other applicable or amended sections of the Act, or be in noncompliance with any criteria, guidelines or regulations affecting sludge use or disposal promulgated pursuant to the Solid Waste Control Act, or State Clean Air Act, the Toxic Substances Control Act or state criteria applicable to the sludge management method being used.
- M. Containing nonbiodegradable complex carbon compounds.
- N. Constituting a slug load.
- O. Containing stormwater, surface water, uncontaminated groundwater, roof runoff, foundation drain water or drainage from the fields.
- P. Containing any garbage with particles greater than 1/2 inch in size.
- Q. Containing pesticides, unless upon written request, special permission is obtained from the Township.

**§ 188-38. Trucked or hauled wastewater.**

- A. Tank truck or hauled waste discharges to the sewerage system are prohibited, except as authorized hereinafter.
- B. Tank truck or hauled wastes may only be discharged into sewerage system upon the issuance of a discharge permit by the Township.
- C. Tank truck or hauled wastes authorized for discharge shall be discharged only at the location, time and at a rate fixed by the discharge permit.
- D. Tank truck or hauled waste discharges shall not include any industrial wastewater except as authorized in writing by the Township.
- E. Prior to discharge, the tank truck or hauled waste shall be subject to inspection and sampling by the Township.
- F. Tank truck or hauled waste discharges shall be subject to rates and charges in accordance with a schedule established by the Township, as amended from time to time.

**§ 188-39. Strength of waste surcharge.**

- A. Any user discharging wastewater to the sewerage system defined as extra-strength wastewater in this article or as revised in such resolutions as the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall adopt from time to time shall pay the surcharge established in this chapter or as amended by resolution of the Board of Supervisors. The effective date of any change in definitions or fees shall be stated in all such resolutions.
- B. No user shall discharge into the sewerage system any extra-strength wastewater without a written permit from the Township providing for sampling and the payment of a surcharge to the Township or

West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System), in accordance with the formulas set forth in the current pretreatment chapter. The Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) shall retain and have the right at any time to give notice to the industrial user that extra-strength discharges will no longer be accepted.

- C. The surcharge computations shall be based on the wastewater sample analyses for the most recent complete calendar quarter. Surcharges shall be based on wastewater sample analyses (or, in the absence thereof, on the Township estimates) for the calendar quarter which they apply. The surcharge formulas are independent of each other and measure different characteristics of the same wastewater. Surcharges measured by each formula are cumulative.
- D. The surcharge billings shall be in addition to any other quarterly sewer use charge paid by the user to the Township. Payment of a surcharge shall not relieve the user of its obligation to comply with the local loading limits promulgated by resolution in § 188-40B of this article.

**§ 188-40. Prohibitions and restrictions on industrial users.**

- A. Permit required for discharge of industrial wastewater. Prior to the discharge of any industrial waste or other waste not defined as sanitary sewage into the sewerage system, the discharger shall first obtain an industrial wastewater discharge permit issued by the Township.
- B. Local discharge limits.
  - (1) The Township shall, by resolution adopted by the Township's Board of Supervisors, establish and promulgate local discharge limits regulating the discharge of specific pollutants to the sewerage system by industrial users. Local discharge limits may be established for any substance which is discharged, or likely to be discharged, to the sewerage system. Such limits shall be calculated as mandated by the pretreatment coordinator and the Engineer, and may be amended from time to time by the control authority.
  - (2) Local discharge limits may limit concentration, mass or a combination of the two.
  - (3) The procedure for the calculation of local discharge limits shall be as recommended by the EPA.
  - (4) Local discharge limits shall be calculated to prevent interference; pass-through; the discharge of toxic materials in toxic amounts; threats to worker health and safety; physical, chemical or biological damage to the sewerage system; and noncompliance with the Municipal Authority's NPDES permit or the West Goshen Township Sewer Authority's NPDES permit (in the case where the user is connected to the West Goshen Township Sewerage System).
  - (5) Local discharge limits applicable to industrial users shall be adopted by resolution of the Township. Local discharge limits applicable to all industrial users shall be included in all industrial waste discharge permits.
  - (6) Discharging any pollutant in excess of a local discharge limit established for that pollutant shall be a violation of this article.

**§ 188-41. Spills or slug loads.**

- A. All industrial users shall provide and maintain at their own expense facilities adequate to prevent an accidental discharge or slug load of any substance stored or used at the industrial user's facilities that, if discharged into the sewerage system, will violate any of the provisions of §§ 188-37 and 188-40 of this article. Slug control plans shall be submitted, as requested, to both the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, detailing the facility plans and operating procedures to be utilized by the industrial user for this protection. Slug control plans shall contain, at a minimum, the following information, in addition to such additional data as shall be required from time to time by the pretreatment coordinator:

- (1) A description of discharge practices, including nonroutine discharges; and a complete description of stored chemicals.
  - (2) Procedures for immediately notifying the pretreatment coordinator and the municipality to whose sewer collection system the industrial user is connected of accidental discharges and slug loads into the sewerage system.
  - (3) Procedures to prevent adverse impacts from such discharges and procedures to prevent reoccurrence of all such discharges.
- B. An industrial user proposing to connect to the sewerage system after the effective date of this article shall submit a copy of its slug control plan to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, and to the pretreatment coordinator for approval, or demonstrate to the satisfaction of the pretreatment coordinator they are not needed, before connection to the sewerage system. Review of such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the industrial user's facility as necessary to meet the requirements of this article.
- C. In the case of an accidental discharge or slug load to the sewerage system of any pollutant, the industrial user shall immediately (within not more than 30 minutes) notify by telephone the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, and the pretreatment coordinator of the incident. The notification shall include information regarding the location of the discharge, the kind of pollutants involved, the concentration and volume of the discharge and corrective actions planned or taken.
- D. Within five days following an accidental discharge or slug load, the industrial user shall submit to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, and to the pretreatment coordinator a detailed written report describing the cause of the discharge and the measures to be taken by the industrial user to prevent similar future occurrences. Such notification shall not relieve the industrial user of any liability on account thereof.
- E. A notice shall be permanently posted by each industrial user on a bulletin board or other prominent place advising employees whom to call in the event of an accidental discharge or slug load. Employers shall inform all employees who may cause or suffer such an accidental discharge to occur of the emergency notification procedure and shall keep a log verifying the method, manner and frequency of such notification.

#### **§ 188-42. National Categorical Pretreatment Standards.**

If the National Categorical Pretreatment Standards, located in 40 CFR Chapter 1, Subchapter N, Parts 405-471, as amended from time to time, for any industrial user are more stringent than limitations imposed under this article for industrial users in that subcategory, then the pretreatment standards shall apply and are hereby incorporated in this article. The Township shall notify all affected industrial users of the applicable reporting requirements under 40 CFR 403.12. If an industrial user subject to a National Categorical Pretreatment Standard has not previously submitted an application for an industrial waste discharge permit, the industrial user shall apply for a permit within 90 days of the promulgation of the National Categorical Pretreatment Standard.

#### **§ 188-43. Dilution prohibition.**

Except where expressly authorized to do so by an applicable pretreatment standard or pretreatment requirement, no industrial user shall increase the use of process water or in any other way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with a pretreatment standard or requirement. The Township may impose mass limitations on industrial users in cases where the imposition of mass limitations is appropriate.

**§ 188-44. State requirements.**

State requirements and limitations on industrial wastewater discharges shall apply in any case where they are more stringent than federal requirements and limitations or those established and imposed in this article.

**§ 188-45. Township's right of revision.**

The Township reserves the right to establish more stringent limitations or requirements on discharges to the sewerage system.

**§ 188-46. Industrial waste discharge permits.**

**A. General.**

- (1) No industrial users shall connect to or discharge wastewater to the sewerage system without an industrial waste discharge permit.
- (2) Upon written application to the Township, but prior to discharge, the pretreatment coordinator may determine that industrial users which are not significant industrial users or do not have industrial wastewater do not require an industrial waste discharge permit and may discharge industrial wastewater to the sewerage system, but are required to comply with all other provisions of this article. If an industrial user makes changes to the processes, flow, wastewater concentration, wastewater characteristics or other operations reported in the most recent industrial waste discharge questionnaire filed by the industrial user with the Township, and those changes result in its meeting the definition of an industrial user, the industrial user shall immediately upon becoming aware that such a change has occurred, or 90 days prior to such a change if it is planned, notify in writing both the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, and, if the application and proposed discharge are in compliance with this article, obtain an industrial waste discharge permit, which shall be issued within 90 days of submission of the permit application.
- (3) Where an industrial user, subject to a newly promulgated National Categorical Pretreatment Standard, has not previously submitted an application for an industrial waste discharge permit, the user shall, within 90 days after the promulgation of the applicable National Categorical Pretreatment Standard:
  - (a) Obtain an industrial waste discharge permit; and
  - (b) Provide the baseline monitoring information required by 40 CFR 403.12(b), as amended from time to time. This information shall be incorporated into the application for an industrial waste discharge permit.

**B. Permit application.**

- (1) Industrial users shall file with the pretreatment coordinator a complete and accurate industrial waste discharge permit application in the form prescribed by the Township.
- (2) The application for an industrial waste discharge permit shall be fully completed and verified in writing by the industrial user or a duly authorized and knowledgeable officer, agent or representative thereof. The application shall contain, in units and terms appropriate for evaluation, such scientific or testing data or other information as may be required by the Township, and the industrial user shall pay an application fee to and shall reimburse the Township for all expenses incurred as a result of the processing of the signed application. The Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall have, at their discretion, the right to inspect the premises, equipment and material and laboratory testing facilities of the applicant.
- (3) Notwithstanding the above, the applicant shall provide the following minimum information to the

pretreatment coordinator:

- (a) Name and address of the user; name, title and telephone number of responsible official; name, title and phone number of person to contact for information about the industrial waste discharge.
  - (b) Description of the industry and the manufacturing processes or operations that occur there and the types of products that are produced.
  - (c) Applicable standard industrial classification codes for activities conducted at the facility.
  - (d) Statement as to whether the industry is subject to compliance with National Categorical Pretreatment Standards, and if so, which ones apply.
  - (e) Indication and description of the sources of or the processes that produce industrial wastewaters.
  - (f) Wastewater constituents and characteristics as required by the Township and as determined by a reliable analytical laboratory; sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Section 304(g) of the Act and contained in 40 CFR 136, as amended. If the discharge is from a proposed new discharge, wastewater characteristics shall be reliably estimated in accordance with accepted procedures.
  - (g) Volume of industrial wastewater to be discharged to the sewerage system and the methods of measuring the same. Flow volume information shall include the time and duration of the discharge and the average daily and thirty-minute peak wastewater flow rates, including monthly and seasonal variations, if any.
  - (h) Description of any wastewater treatment facilities or processes used or proposed to be used to treat the industrial wastes prior to their discharge to the sewerage system.
  - (i) Schematic flow diagram showing the existing and proposed sources of industrial wastewater and the on-site treatment processes.
  - (j) The quantity of sludges removed from the industrial user's facility system and their method and location of disposal.
  - (k) Description of any other wastes that are removed from the industrial user's facility system, their quantities and methods and locations of disposal.
  - (l) List of raw materials used or stored on the premises, their material safety data sheets, their approximate quantity of usage on a monthly basis and what they are used for.
  - (m) Plans and specifications for a sampling manhole.
  - (n) A list of any additional environmental control permits held by or for the facility, such as air quality permits, RCRA permits, stormwater management permits and all other required permits.
  - (o) Such additional information as the Township shall require.
- (4) Review and approval.
- (a) The industrial waste discharge permit application shall be reviewed by the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, and if acceptable to such municipality, shall be submitted to the pretreatment coordinator for review and approval.
  - (b) No industrial waste discharge permit shall be issued to an industrial user whose discharge of materials to sewers, whether shown upon the application or determined after inspection and testing conducted by the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, is not in conformance



with federal, state or the Township's ordinances and resolutions. If an application is denied, the Township shall state in writing the reason or reasons for denial, and said written communication shall be delivered to the applicant, and if applicable, to the municipality to whose sewer system the industrial user is proposing to connect.

- (5) If the Township denies an application for an industrial waste discharge permit, the industrial user may, within 60 days after its receipt of the Township's denial, request review by the control authority of such denial. The request for review shall be in writing and shall specify the grounds for review, and shall be accompanied by such appropriate supporting information and documents as shall be sufficient to apprise the control authority of the substance of the industrial user's position. The control authority at a public hearing shall review the industrial waste discharge permit application, the Township's written denial and such other evidence and matters as the industrial user shall present at a public hearing. It shall also consider all evidence offered by the Township or the pretreatment coordinator and any interested party. The public hearing shall take place no later than 45 days following receipt of the industrial user's written request for the review. The control authority's written decision shall be provided to the industrial user within 20 days of the close of the public hearing or hearings and shall be final.
  - (6) If, based on the characteristics of the industrial user's waste discharge, additional pretreatment and/or operation and maintenance procedures are required to meet any Township, municipal, state or federal pretreatment standards, the industrial user shall submit to the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) prior to issuance of the industrial waste discharge permit the shortest, reasonable schedule by which the industrial user will provide such additional pretreatment. The Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) shall include a compliance schedule acceptable to the Township and/or West Goshen Township, as the case may be, in the user's industrial waste discharge permit, which shall be conditional upon compliance with timely implementation of the additional pretreatment required. The following conditions shall apply to this schedule:
    - (a) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the industrial user to meet the applicable pretreatment standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).
    - (b) No increment shall exceed nine months.
    - (c) Not later than 14 days following each date in the schedule and the final date for compliance, the industrial user shall submit to both the pretreatment coordinator and the municipality to whose sewer system it is connected a written report, including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay and the steps being taken by the industrial user to return the construction and implementation to the schedule established. In no event shall more than three months elapse between such progress reports to the pretreatment coordinator and the municipality to whose sewer system it is connected.
- C. Permit action. A permit issued under this section may be modified, revoked and reissued or terminated for good cause, including but not limited to the following:
- (1) To incorporate any new or revised federal, state or local pretreatment standards or requirements.
  - (2) Material or substantial alterations or additions to the discharger's operation which were not covered in its current permit.
  - (3) A change in any condition that requires either a temporary or permanent reduction or elimination

of the authorized discharge.

D. Permit conditions.

- (1) Industrial waste discharge permits shall be expressly subject to all provisions of this article and all other applicable regulations, resolutions, user charges and fees established by the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System. Permits shall contain the following:
  - (a) Limits on the average and maximum wastewater constituents and characteristics, as based on applicable general pretreatment standards in 40 CFR, Part 403, as amended from time to time, categorical standards, local limits and state and local law;
  - (b) Requirements for submission of technical reports or discharge reports, including the information to be contained and the signatory requirements of these reports;
  - (c) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the Township and affording the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, access thereto;
  - (d) Requirements for notification of the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, in advance of any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the sewerage system;
  - (e) Requirements for notification of slug discharges;
  - (f) List of prohibited discharges;
  - (g) Statement of duration of the permit;
  - (h) Notification of the rules regarding transferability, if allowed;
  - (i) Notification of penalties provided for noncompliance;
  - (j) Specifications for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests and reporting schedule;
  - (k) Right of entry requirements upon the property and within the facility for which the permit is issued by authorized representatives of the Township and the municipality to whose sewer system the user is connected; and
  - (l) Indemnification of the Township and such municipality from all liability resulting from or on account of any discharge.
- (2) Permits may also contain other requirements, including but not limited to:
  - (a) Limits on the average and maximum rate and time of discharge or requirements for flow regulation and equalization;
  - (b) Requirements for installation and maintenance of inspection and sampling facilities and pretreatment facilities;
  - (c) Compliance schedules; and
  - (d) Other conditions as deemed appropriate by the Township or the municipality to whose sewer system the industrial user is connected to ensure compliance with this article, applicable municipal ordinances or other requirements.
- (3) Issuance of an industrial waste discharge permit in no way relieves the industrial user from any liability on account of its discharge into the sewerage system, whether such discharge is permitted thereby or not.

E. Permit duration and permit fees.

- (1) Industrial waste discharge permits shall be issued for an initial one-year period and shall expire at the end of that one-year period unless the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, elects to revoke the permit on or before its expiration. Upon the user's payment of the requisite permit fee to the Township, renewal permits shall be issued for a period not to exceed five years upon written application of the permittee made at least 60 days prior to the permit's expiration. Subsequent permits may be issued upon payment to the Township of the requisite fee for up to five-year periods upon prior written application made to the Township at least 90 days before the permit's scheduled expiration. The terms and conditions of the permit shall be subject to modification by the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, during the term of the permit. The industrial user shall be informed of any proposed changes in its permit at least 30 days prior to the effective date of the change. However, the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall use their best efforts to inform the industrial user of such change at least 60 days prior to the effective date of the change, but its/their failure to do so shall not preclude or delay implementation of the required change. In the event that such changes require major changes in pretreatment by the industrial user, and the industrial user's failure to comply with the amended discharge requirements does not itself or with other failures to comply put the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, in substantial danger of violating any agreement, permit, regulation, ordinance or law, then the pretreatment coordinator may grant the industrial user a period not to exceed six months from the date otherwise required for compliance within which to effect such changes to its pretreatment facilities as are necessary to comply with the permit's terms and conditions. Upon demonstration of justifiable cause proven by the permittee within the said six-month period, the pretreatment coordinator may extend the date otherwise required for compliance for such additional reasonable period of time as he determines necessary. No extensions shall be considered or granted unless the industrial user makes written request for a time extension and submits to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, an implementation schedule acceptable to the Township and such municipality contemporaneously with the extension request.
  - (2) Permit fees and renewal fees shall be established by resolution adopted and amended from time to time by the control authority and shall include but not necessarily be limited to the following: an application review fee, an administrative fee, a sampling fee, an analytical costs fee, any surcharges and/or fines and any miscellaneous expenses incurred from the purchase or utilization of any sampling apparatus and/or activities.
- F. Permit transfer. Industrial waste discharge permits are issued to a specific industrial user for a specific operation. An industrial waste discharge permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, different facilities or a new or changed operation without the approval of the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System. The succeeding owner or industrial user shall file a new application and, until permit or modification thereof is issued, shall comply with the terms and conditions of the existing industrial waste discharge permit and such additional permit conditions as the Township and such municipality shall require.
- G. Waste characteristic change. Any industrial user who plans or becomes aware of a change in the method of operation or in the pretreatment facilities which will increase the concentration of pollutants which are regulated by this article or the volume of wastewater discharged to the sewerage system shall notify the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, of the change at least 90 days prior to such change. If required by the Township or the municipality, the industrial user shall apply for an industrial waste discharge permit that reflects the proposed changes. The new industrial waste discharge permit will be subject to a fee to reimburse the Township and such municipality for all expenses incurred as a result of the processing of the permit and permit application. Approval or denial of a new industrial

waste discharge permit shall be regulated by the procedures established hereunder for the issuance of an original permit.

- H. Files. The Township shall maintain files in which copies of all industrial waste discharge permits, revisions thereto and supporting data will be filed for reference. Files shall be maintained for a period of at least five years. This period of retention shall be extended during the course of any unresolved litigation regarding the industrial user or when requested by EPA.

**§ 188-47. Reporting requirements for industrial users.**

- A. Compliance date report under National Categorical Pretreatment Standards. Within 90 days following the date for final compliance with applicable National Categorical Pretreatment Standards or, in the case of a new source, following commencement of the introduction of wastewater into the sewerage system, any industrial user subject to National Categorical Pretreatment Standards shall submit to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, a written report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by categorical standards, and the average and maximum daily flow from these process units in the user's facility which are limited by such categorical standards. The report shall state whether the applicable categorical standards are being met on a consistent basis and, if not, what additional operations and maintenance and/or pretreatment are scheduled to bring the industrial user into compliance with the applicable categorical standards. This statement shall be signed by an authorized representative of the user and, when requested by the Township, certified by a qualified professional.

- B. Periodic compliance reports.

- (1) Each industrial user shall submit to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, during the months of April, July, October and January, or by such date as otherwise specified in the industrial users industrial waste discharge permit or otherwise by the Township, a complete and accurate written report, in form and content as prescribed by the Township, indicating the nature and concentration of pollutants in the discharge during the reporting period which are regulated by the industrial waste discharge permit. All monitoring data obtained for purposes of determining compliance with the industrial waste discharge permit by certified analytical techniques must be reported by the industrial user. In addition, this report, where applicable, shall include a record of all daily flows which, during the reporting period, exceeded the maximum daily flow listed in the industrial user's industrial waste discharge permit. At the discretion of the pretreatment coordinator, and in consideration of such factors as high or low flow rates, holidays, budget cycles, etc., the Township, upon written request from the industrial user, may, but shall not be required to, agree to alter the months during which the above reports are to be submitted. The report shall also contain the following certification statement signed by the authorized representative of the user:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a procedure designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the facilities proposed to be connected to the sewerage system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations relating to unsworn falsifications."

- (2) The Township may impose mass limitations where the imposition of mass limitations is appropriate. In such cases, the periodic compliance report required by Subsection B(1) shall state the mass of pollutants regulated in the industrial user's discharge permit to the sewerage system. These reports shall contain the results of sampling and analysis of the discharge, including the flow and the nature and concentration, or, where requested by the Township,

production and mass of pollutants contained therein, which are limited by the applicable pretreatment standards. The frequency of monitoring shall be prescribed in the industrial user's industrial waste discharge permit. All sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Section 304(g) of the Act and contained in 40 CFR 136, and amendments thereto, or with any other test procedures approved by the EPA.

- (3) For categorical industries that have mass limits as categorical standards, the Township may specify equivalent concentrations to regulate the strength of the industrial user's discharge. If concentration limits are regulated in lieu of mass discharge limits, the industrial user must provide the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) with the following information as part of each written compliance report:
  - (a) For the reporting period, the rate of production of the process for which categorical standards have been established.
  - (b) The average wastewater flow rate generated by the regulated production activity for the reporting period.
  - (c) Thirty days' notice of any anticipated change in production.
- (4) The industrial wastewater discharged into the sewerage system shall be sampled and analyzed by and at the expense of the industrial user, and copies of the original laboratory reports listing the results of the analyses and the analytical methods used shall be submitted to the pretreatment coordinator and to the municipality to whose sewer system the industrial user is connected, with the industrial user's periodic compliance report required in Subsection B(1). Frequency of sampling and analyses shall be quarterly, or as otherwise specified by the industrial waste discharge permit by the Township. Unless otherwise stated in the industrial waste discharge permit, all samples are to be time composite samples for the period of discharge or for 24 hours, whichever is less, with sampling intervals of not more than one hour. The samples shall be analyzed for the substances and characteristics required by the industrial user's industrial waste discharge permit and shall be representative of the conditions occurring during the reporting period. The industrial user shall follow the proper sample preservation and analysis techniques detailed in 40 CFR 136, as from time to time amended, or other techniques approved by the Township.
- (5) All records and information resulting from the monitoring activities required by the industrial waste discharge permit shall be retained by the industrial user for at least five years. This period of retention shall be extended during the course of any unresolved litigation regarding the industrial user or the Township or when requested by either the Township or the EPA.

C. Baseline monitoring report.

- (1) Where an industrial user, subject to a newly promulgated National Categorical Pretreatment Standard, has not previously submitted the baseline monitoring information required by 40 CFR 403.12(b), as from time to time amended, the industrial user shall, within 180 days after the promulgation of the applicable National Categorical Pretreatment Standard, provide this information to the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System). The report shall include all items required by 40 CFR 403.12(b).
- (2) A new source, or an industrial user proposing to discharge wastes into the sewerage system that is subject to a National Categorical Pretreatment Standard, shall submit to the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) the baseline monitoring report required by 40 CFR 403.12(b) at least 90 days prior to commencement of discharge from the regulated process or facility.

D. Noncompliance discharge report. If sampling performed by an industrial user indicates a violation of this article, an applicable pretreatment standard or the industrial user's industrial waste discharge permit, the industrial user shall notify the pretreatment coordinator and West Goshen Township, in the

case where the user is connected to the West Goshen Township Sewerage System, within 24 hours of becoming aware of the violation. The industrial user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the pretreatment coordinator and to the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, within 30 days after becoming aware of the violation.

**§ 188-48. Monitoring facilities.**

- A. When requested by the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, all industrial users shall provide and operate, at their own expense, monitoring facilities to allow inspection, sampling and flow measurements of its industrial waste discharge. The monitoring facility should normally be situated on the industrial user's premises, but the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, may, when such a location would be impractical or cause undue hardship on the industrial user, allow the facility to be constructed in the public street or sidewalk area, subject to the issuance of proper permits for such purpose, and located so that it will not be obstructed by landscaping or parked vehicles.
- B. The monitoring facility shall be constructed in accordance with plans and specifications approved by the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System. There shall be ample room in or near such facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the industrial user. The facility shall be located as to be accessible at all times to persons authorized by the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System. By obtaining an industrial waste discharge permit, the industrial user consents to the entry upon its land and facility and agrees to facilitate such entry by representatives of the Township and such municipality, and further consents to the use of the monitoring facility for observation, sampling and measuring of the wastewater discharge at all times. Construction of the monitoring facility shall be completed within 120 days following issuance of the industrial waste discharge permit.

**§ 188-49. Inspection and sampling.**

The Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, may inspect the facilities of any industrial user. Persons or occupants of premises where wastewater is created or discharged shall allow the Township or its representative, or West Goshen Township in the case where the user is connected to the West Goshen Township Sewerage System or its representatives, as a condition of the permit issued by the Township authorizing any discharge to the sewerage system, ready access at all reasonable times, and in the event of emergency situations posing an immediate threat to the sewerage system, to all parts of the premises, buildings and facilities for the purpose of inspection, sampling records examination and copying, or in the performance of any of their duties. The Township, such municipality and EPA shall have the right to set up on the industrial user's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where an industrial user has security measures in force which would require proper identification and clearance before entry onto their premises, the industrial user shall make necessary arrangements with its security guards so that upon presentation of suitable identification, personnel from the Township, such municipality or EPA will be permitted to enter, without delay.

**§ 188-50. Pretreatment.**

- A. Industrial users shall provide necessary pretreatment and flow-equalizing facilities as required to

comply with this article and shall achieve compliance with all applicable National Categorical Pretreatment Standards within the time limitations as specified by the appropriate federal regulations, or as otherwise required by the Township. Any industrial user required to pretreat or flow-equalize wastewater to a level in compliance with the provisions of this article shall be provided, operated and maintained at the industrial users sole expense. Detailed plans and other materials and documents showing the pretreatment facilities and operating procedures shall be submitted to the pretreatment coordinator and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, for review before construction of the facility. The review of such plans and operating procedures shall in no way relieve the industrial user from the responsibility of modifying the facility as necessary to produce an effluent in compliance with the provisions of this article. Any subsequent changes in the pretreatment facilities, flow-equalizing facilities or method of operation shall be reported to and be reviewed and commented on by the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, prior to the industrial user's initiation of the changes.

- B. The industrial user may allow a bypass which does not cause pretreatment standards to be violated, but only for essential maintenance to assure efficient operation. If an industrial user knows in advance of the need for a bypass, it shall submit prior written notice to the pretreatment coordinator and to the municipality to whose sewer system it is connected at least 10 days before the date of the bypass. The industrial user shall give oral notice of an unanticipated bypass that exceeds applicable pretreatment standards to the pretreatment coordinator and the municipality to whose sewer system it is connected immediately after an unanticipated bypass incident is brought under control, but in no event later than four hours from the time the industrial user becomes aware of the bypass. A written report shall also be provided to the pretreatment coordinator within five working days of the time the industrial user becomes aware of the bypass. The written report shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and, the steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass.
- C. The Township shall annually publish in the local daily newspaper of largest circulation within the Township's service area a list of industrial users serviced by the Township which were in significant noncompliance with any applicable pretreatment standards or pretreatment requirements during the preceding twelve-month period.
- D. All records relating to compliance with pretreatment standards and pretreatment requirements shall be made available to the Township, West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) and the EPA upon request.
- E. The Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) shall have access to all such pretreatment facilities and flow-equalizing facilities as required by this article at all reasonable times for purposes of inspection and testing and, in the event of an emergency posing a threat to the sewerage system, at any time.

**§ 188-51. Hazardous waste discharge.**

- A. It shall be a violation of this article and the industrial user's discharge permit for an industrial user to discharge any quantity of waste to the sewerage system, which, if otherwise disposed of, would be a hazardous waste under 40 CFR, Chapter 1, Section 261.1 et seq., Subparts A through D, as from time to time amended. In the event of an accidental discharge, the industrial user shall provide an immediate written notification of such discharge, but in no event later than four hours from the time the user becomes aware of or in the exercise of reasonable prudence should have become aware of the discharge, to the Township, to West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, to the EPA Region III Waste Management Division Director and to DEP. Failure to provide such notice shall constitute a violation of this article.
- B. The notification required by Subsection A shall include the name of the hazardous waste as in 40 CFR, Chapter 1, Section 261.1 et seq., Subparts A through D, as from time to time amended, the EPA

hazardous waste number, the type of discharge (continuous, batch or other) and a certification under penalties of perjury that the industrial user has a program in place to reduce to compliance levels the volume and toxicity of hazardous wastes illegally discharged to the sewerage system. If the industrial user's discharge to the sewerage system constitutes more than 100 kilograms of such waste, the notification shall also include an identification of the hazardous constituents contained in the waste and an estimation of the mass and concentration of such constituents.

**§ 188-52. Confidential information.**

- A. Information and data on an industrial user obtained from reports, questionnaires, permit applications, permits, notifications, monitoring programs and inspections shall be available to the public or any governmental agency upon written request unless the industrial user specifically requests in writing and is able to demonstrate to the Township's satisfaction that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the industrial user.
- B. When requested by the person furnishing a written report, those portions of a report that have been accepted by the Township as confidential shall not be made available for inspection by the public, but shall be made available upon written request to governmental agencies for uses related to this article, the NPDES permit, state disposal system permits and/or the state or federal pretreatment programs; provided, however, that such portions of any report shall be available for use by the state or any state agency in judicial review or enforcement proceedings involving the person or industrial user furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.
- C. When information accepted by the Township as confidential is transmitted to any governmental agency by the Township, a written notification to the industrial user shall be provided by the Township listing the confidential information transmitted and the governmental entity requesting the information.

**§ 188-53. Measuring volumes of wastewater.**

- A. The flow volume used to determine wastewater flows and surcharges shall be specified in the industrial waste discharge permit and be based on:
  - (1) Direct wastewater metering;
  - (2) Metered water use; or
  - (3) Such other method acceptable to the Township.
- B. Both the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System may, in their discretion, require that each industrial user connected to its sewer system which has been issued an industrial waste discharge permit install, calibrate, maintain and use any meter or measuring device specified therein at the industrial user's own expense. The municipality which accepts the industrial waste shall be responsible for the reading of all meters or measuring devices. The Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall have the absolute right, but not the duty, of reading the meters, from time to time, at its discretion. The meters and devices shall be made available for meter reading at any reasonable time and, in the event of an emergency posing a threat to the sewerage system, at any time.

**§ 188-54. Enforcement.**

- A. Immediate suspension of discharge presenting imminent danger.
  - (1) The Township and West Goshen Township, in the case where the user is connected to the West



Goshen Township Sewerage System, shall order the immediate suspension of discharge of wastewater to the sewer system when such suspension is necessary, in the opinion of the Township or West Goshen Township, as the case may be, in order to stop or prevent an actual or threatened discharge which presents an imminent danger of harm to people, to the sewerage system or to the environment, or interference ("dangerous discharge").

- (2) Any industrial user notified of an order to suspend shall comply therewith immediately. In the event of a failure of the industrial user to comply voluntarily with the suspension order, the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall take such steps as it deems necessary to enforce compliance with the order to effect the suspension of discharge of the industrial user's wastewater into the sewerage system, including immediate severance of the industrial user's sewer connection to the Township's or to West Goshen Township's Sewerage System. The Township or West Goshen Township shall permit reinstatement of the discharge upon satisfactory proof of the elimination of the imminent and substantial danger referred to above. The industrial user shall submit a detailed written report to the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) describing the causes of the actual or threatened discharge and the measures taken to prevent any future occurrence within 15 days of the date of the first such discharge or threat of discharge. The Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) shall have the concurrent right and power to suspend discharge by such industrial user to the sewerage system and to enforce the requirements of this subsection.
  - (3) Nothing herein shall be construed to prohibit the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System) from enforcing this article, or any part hereof, or from enjoining and preventing the discharge of any hazardous waste or any other discharge deemed unlawful or dangerous to the sewerage system by any legal process selected by the Township and West Goshen Township (in the case where the user is connected to the West Goshen Township Sewerage System), including but not limited to an action or actions at law or in equity for injunctive relief and damages, administrative enforcement proceedings, criminal enforcement proceedings authorized by any federal or state statute or law, or through any other authorized legal proceeding. All remedies of the Township and West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, shall be cumulative.
- B. Termination of service. Any user who violates any provision of this article, any regulation promulgated by the Township pursuant to this article or any enabling legislation, any resolution promulgated by the Board of Supervisors pursuant to or related to this article, any applicable state or federal regulations or an industrial waste discharge permit or any condition thereof shall be subject, in addition to any civil or criminal penalties which may be imposed, to severance of its sewer connection to the sewerage system, termination of its sewage service and revocation of its industrial waste discharge permit.
- C. Notification of violation. Whenever the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, finds that the industrial user has violated or is violating this article, an industrial waste discharge permit or any prohibition, limitation, condition or requirements contained herein, or has failed to timely provide the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, with the information needed to accurately determine compliance with any pretreatment standard or pretreatment requirement, the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, or both, may serve upon such person or industrial user who is in violation a written notice of violation. The notice may require a response in the form of a plan, explanation, compliance schedule or other appropriate response within a specified time period. Compliance with any such requirement shall be mandatory.
- D. Legal action by municipalities. If any industrial user violates the provisions of this article, Township, federal or state pretreatment standards or pretreatment requirements, its industrial waste discharge

permit, any prohibition, limitation, condition or requirements contained therein or herein or any order issued by the Township or other governmental authority having jurisdiction related to the sewerage system or the sewer service of the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, either the Township or West Goshen Township, in the case where the user is connected to the West Goshen Township Sewerage System, or both, may commence an action or actions at law or in equity for appropriate legal and/or equitable relief in the Court of Common Pleas of Chester County, and may, in addition, take such other enforcement action as provided for in this section.

**§ 188-55. Enabling regulations.**

As a precondition to the Township's acceptance of sewage effluent containing industrial wastewater from another municipality, each such municipality connected to the sewerage system shall, within 90 days after adoption of this article, enact regulations imposing the discharge restrictions (and require compliance with industrial waste discharge permits), charges, reporting and monitoring requirements no less stringent than those set forth in this article on all users within its jurisdiction, and establishing procedures for compliance with this article. Such requirement shall be embodied in a written agreement between the Township and such municipality. All such regulations so adopted shall be amended within 60 days, as necessary, to impose the same standards and requirements as those imposed by the Township through amendment of this article. Such municipality shall, upon adoption of the required regulations, give written notice to all commercial and industrial dischargers connected to the municipality's sewerage system of all of the regulatory compliance requirements related to industrial waste discharge permits.

**§ 188-56. Civil penalties for industrial users.**

- A. The Township may establish, by resolution adopted by the Board of Supervisors, a recommended schedule of civil penalties which may be imposed by the Township against any industrial user who violates a provision of this article or its industrial waste discharge permit that is in significant noncompliance or which fails to respond timely and adequately to any notice of violation issued by the Township in accordance with the Township's civil assessment policy. In assessing such penalties, the Township shall provide the noncomplying industrial user with the opportunity to show cause why a civil penalty pursuant to § 188-58 hereof should not be assessed. Notice shall be served upon the industrial user specifying the time and place of a hearing to be held by the Township's Board of Supervisors, or a hearing officer designated by the Board for that purpose. Notice of the hearing shall be served by the Township's administrative staff upon the industrial user and any other party in interest at least 10 days before the hearing by regular United States Mail, postage prepaid.
- B. In furtherance of any such proceeding, the Board or hearing officer, as the case may be, shall have the following powers:
  - (1) Issue in the name of the Township notices of hearings requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;
  - (2) Issue subpoenas and take the evidence; and
  - (3) Make findings of fact, conclusions of law and render a decision and order, which may include the imposition of a civil penalty or such other order as the Board shall direct.
- C. Testimony at the hearing shall be under oath and recorded stenographically. A transcript shall be made available to any party to the proceeding upon payment of the charges therefor. All other administrative costs of the proceedings, including but not limited to stenographer attendance fees, advertising, postage and notices and similar costs, shall be paid for by the user, who shall deposit with its request for hearing a deposit escrow fee of \$1,000 from which the administrative fees shall be paid. Any balance remaining after payment of all such costs shall be returned to the user requesting the hearing.

**§ 188-57. Injunctions against violations of pretreatment standards.**

The Township may seek injunctive relief in a proceeding in equity for the prevention, abatement or termination of any prohibited discharge to the sewerage system, for a violation of any pretreatment standard or for violation of any other provision of this article in any of the following circumstance. In any such proceeding, the Township may seek to collect any civil penalties assessed, or unpaid, pursuant to §§ 188-56 and 188-58 hereof.

- A. A discharge from an industrial user presents an imminent danger of substantial harm to the sewerage system, Township personnel, the environment or the public or imperils or results or may result in a violation of any federal or state permits held by the Township or the West Goshen Township Sewer Authority relating to the use, operation and maintenance of the sewerage system.
- B. A discharge from an industrial user presents an imminent or substantial endangerment to the environment.
- C. A discharge from an industrial user causes the Municipal Authority or the West Goshen Township Sewer Authority to violate any condition of their NPDES permit.
- D. An industrial user has shown a lack of ability or intention to comply with a pretreatment standard.

**§ 188-58. Violations and penalties.**

- A. Fines to be established by Township and by municipalities. As a precondition to the Township's acceptance of sewage effluent containing industrial wastewater from another municipality, each municipality that discharges or is connected to the sewerage system shall, within 90 days of the adoption of this article, enact an ordinance which provides that any industrial user who is found to have violated the ordinance specified by § 188-55 hereof shall be liable to a fine of up to \$1,000, together with the costs of prosecution and the municipality's reasonable attorney's fees, for each offense in a criminal enforcement proceeding commenced before a District Justice. Each day on which a violation shall occur or continue shall be deemed a separate and distinct offense. Such requirement shall be embodied in a written agreement between the Township and such municipality. In addition to all other remedies and penalties provided for in this article, the Township may commence and prosecute an enforcement action before any District Justice for a violation of this article as provided for in this section wherein the violator shall be subject to the fine, costs and fees provided for herein; provided, however, that should any violation of this article constitute a violation of the Sewage Facilities Act, a District Justice shall be authorized to impose a fine of up to \$5,000, together with the costs of prosecution and the municipality's reasonable attorney's fees, for each such offense.
- B. Action to enforce municipalities' ordinances applicable to any user. Each municipality shall, at the direction of the Township, take any action permitted by law or in equity to enforce any ordinance enacted pursuant to § 188-55 or 188-58A of this article.
- C. Civil penalties for violations by industrial users. To the extent that any provisions of this article are enabled by the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. (1965) 1535, as amended, any industrial user who violates any substantive or procedural provision of § 188-40 et seq. hereof or any term or condition of any industrial waste discharge permit may, in addition to all other civil and criminal penalties authorized by this article, be assessed a civil penalty of up to \$5,000 for each such violation, as is determined by the Township depending upon the severity of the violation, pursuant to the procedures and standards set forth in Section 13.1 of the Sewage Facilities Act, 35 P.S. § 750.13a and 13b(b). In addition, the Township may assess against and collect from such violator the cost of damages caused by such violation and the cost of correcting the violation. Each violation for each separate day shall constitute a separate and distinct violation. Notwithstanding the foregoing, a single operational upset which gives rise to simultaneous violations shall be treated as a single violation.

- D. Uses of civil penalties collected by Township. Civil penalties collected pursuant to this section shall be placed in a restricted account and shall only be used for the repair of damage and any additional maintenance needed or any additional costs imposed as a result of the violation for which the penalty was imposed, to pay any penalties imposed upon the Township by the federal or state governments for violation of pretreatment standards, for the costs incurred by the Township to investigate and take enforcement action that resulted in a penalty being imposed and for the monitoring of discharges in a pretreatment program. Funds remaining in the restricted account after the foregoing uses have been met may be used for capital improvements to the Township's sewerage system.

**2020 Chapter 94 Report for Ridley Creek Sewage Treatment Plant  
East Goshen Municipal Authority  
Chester County, Pennsylvania**

**APPENDIX F**

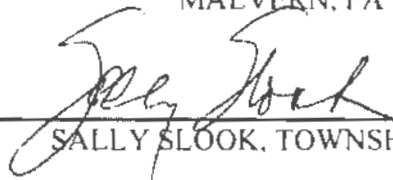
Willistown Township Tributary Municipality Report

WILLISTOWN TOWNSHIP  
MUNICIPAL WASTELOAD MANAGEMENT REPORT  
EAST GOSHEN TOWNSHIP  
RIDLEY CREEK WWTP  
SERVICE AREA  
CALENDAR YEAR 2020

MARCH 2021

PREPARED FOR:

WILLISTOWN TOWNSHIP  
688 SUGARTOWN ROAD  
MALVERN, PA 19355



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SALLY SLOOK, TOWNSHIP MANAGER

PREPARED BY:

CARROLL ENGINEERING CORPORATION  
949 EASTON ROAD  
WARRINGTON, PA 18976



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WILLIAM N. MALIN, P.E., VICE PRESIDENT

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## APPENDICES

Appendix A East Goshen Township Service Area Plans

## ITEM 1 - EXECUTIVE SUMMARY

Flow from Willistown Township is conveyed to the East Goshen Township sanitary sewer system at three (3) locations. This flow is ultimately treated at the Ridley Creek Wastewater Treatment Plant. The three locations are Line Road north of Paoli Pike, Willow Pond Road, and Wyllpen Place west of Dutton Mill Road. Four (4) homes are connected on Line Road; fourteen (14) homes are connected on Willow Pond Road; and two (2) homes are connected on Wyllpen Place. The maps included in Appendix A show the locations of the properties providing flow to East Goshen Township.

The total number of Equivalent Dwelling Units (EDUs) Connected at the end of 2018 was twenty (21). At 262.5 gallons per day (GPD) per EDU, the estimated average flow for the twenty-one (21) homes is 5,250 GPD.

The homes along Line Road and Wyllpen Place are connected to sanitary sewers owned and operated by East Goshen Township.

The sanitary sewer in Willow Pond Road is owned and operated by Willistown Township. The flow is conveyed to sewer in Pond View Lane, which is owned and operated by East Goshen Township.

## ITEM 2 - SEWER EXTENSIONS

There were no sewer extensions during 2018. Willistown Township is not currently planning any further sewer connections to East Goshen Township.

## ITEM 3 - SEWER SYTEM MAINTENANCE

Willistown Township performs basic monitoring and maintenance on the sewer in Willow Pond Road. This sewer is in good condition with no sign of inflow/infiltration. Due to the low number of homes connected to the system, the flows are not metered or sampled. Flows can be estimated from water meter readings.

Willistown Township is not responsible for maintenance of the sewer connections on Line Road or Wyllpen Place.

## ITEM 4 - OVERALL SEWER SYSTEM CONDITION

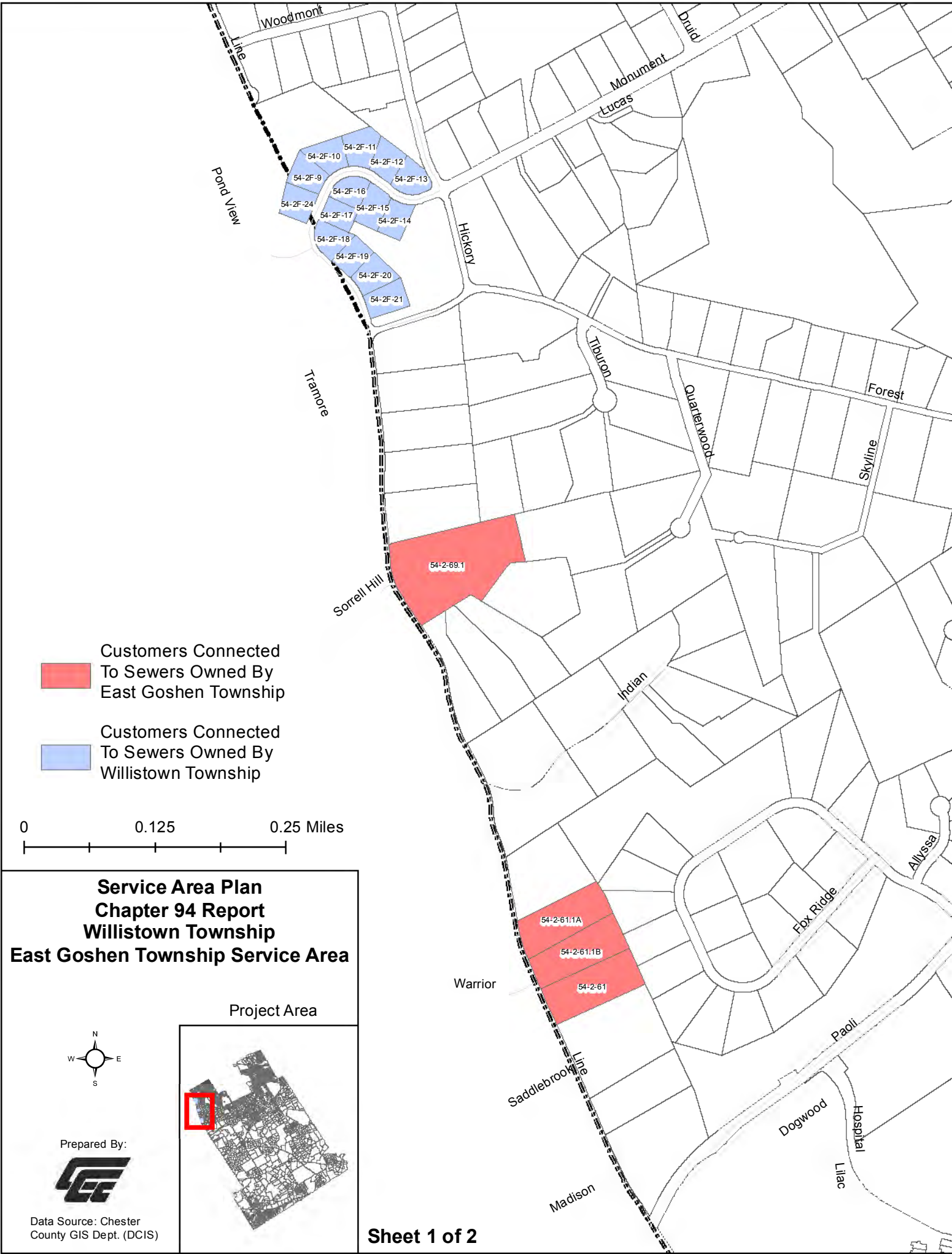
The system is in good condition. There are no portions of the system where rehabilitation or cleaning is needed, or where conveyance capacity will be exceeded in the next five (5) years.



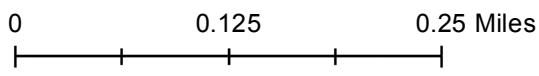
## APPENDIX A

### EAST GOSHEN TOWNSHIP SERVICE AREA PLANS

Document Path: W:\GIS\Projects\Willistown\ArcMap\Chapter94\_North\_2017.mxd

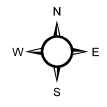


- Customers Connected To Sewers Owned By East Goshen Township
- Customers Connected To Sewers Owned By Willistown Township



**Service Area Plan  
Chapter 94 Report  
Willistown Township  
East Goshen Township Service Area**

Project Area



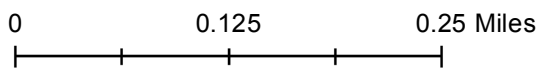
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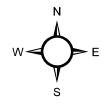
Data Source: Chester County GIS Dept. (DCIS)

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-  Customers Connected To Sewers Owned By East Goshen Township
-  Customers Connected To Sewers Owned By Willistown Township



**Service Area Plan  
Chapter 94 Report  
Willistown Township  
East Goshen Township Service Area**

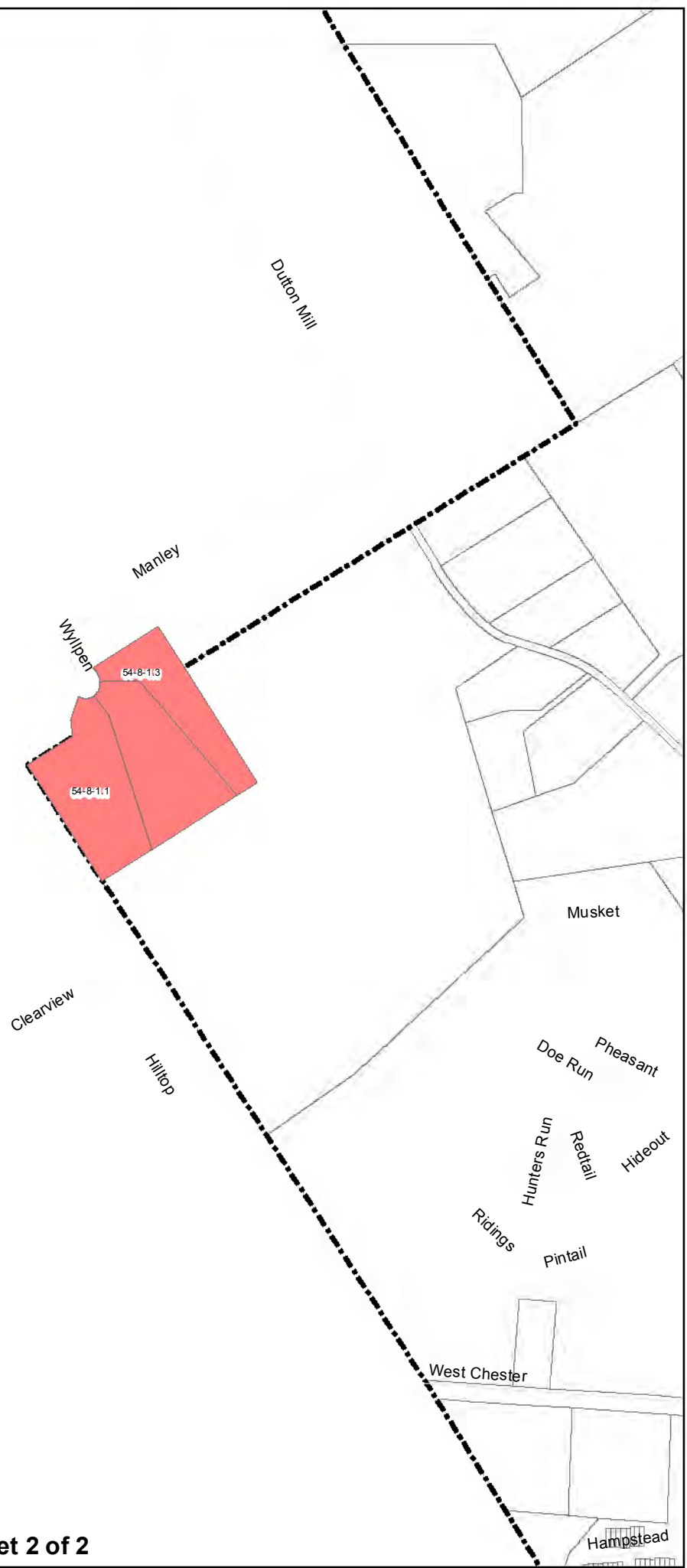


Prepared By:



Data Source: Chester County GIS Dept. (DCIS)

Project Area



**2020 Chapter 94 Report for Ridley Creek Sewage Treatment Plant  
East Goshen Municipal Authority  
Chester County, Pennsylvania**

**FIGURES**

Figure 1 – Chapter 94 Township Wastewater Facilities  
Drawing G-1 – RCSTP Upgrade & Expansion Process Flow Diagram



**EAST GOSHEN  
WASTEWATER FACILITIES  
FIGURE 1**

